# ATO Z COCKTAIL THERAPEUTIC GUIDE TO MEDICAL PRACTITIONERS









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MIND & BODY THERAPY



HERBAL





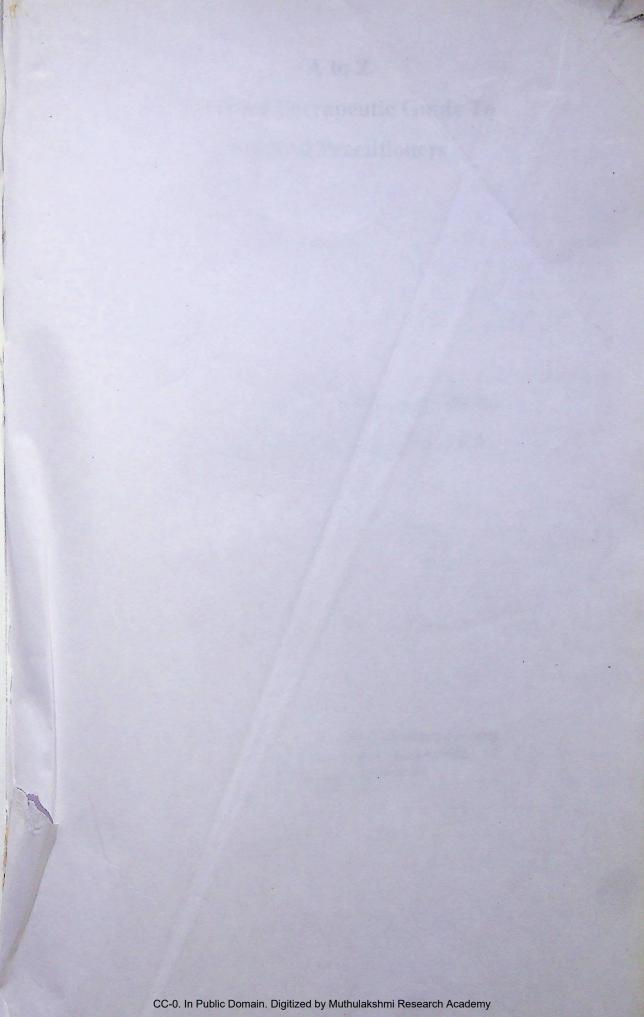
HOMEOPATHY

Dr. S. Sethupathy

ACUPUNCTURE

Dr. C.Chandrasekaran

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## A to Z

## Cocktail Therapeutic Guide To Medical Practitioners

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#### **FOREWORD**

The scientists of yore attempted to concoct an elixir that could cure all diseases and bestow immortality on man. Hindus believe in the *amrita* that could endow anybody that drank it with disease-free life of joy. Dr.S.Sethupathy, M.D.,Ph.D., Professor of Biochemistry and Dr.C.Chandrasekaran B.S.M.S.,Ph.D., in Siddha Medicine, practicing Allopathy and Siddha medicine respectively, spreading over a score of years, with the rich experience of teaching and research, have brought out a book on Medicine – A to Z – jointly together. This book is the juice of their fruit of labor that began with the latter registering under the former for his doctoral work. This juice of their wisdom excels both elixir and *amirtha* in the practical efficacy. It prescribes indispensable therapeutic value for an endless happy life.

The book is a compendious encyclopedia of various Indian diseases and choices of remedies from different system of medicines. The suggestions are based on the knowledge of Allopathy, Homeopathy, or Ayurveda, or combinedly of the two or three. The book evinces a new interest in man, and treats him in a holistic manner. The integrated approach to diagnosis and treatment is pragmatic, since India as a post-colonial nation attempts to combine the native medicine with the alien, perfecting one with the other. In the process, a patient loses his individuality but attains a personality. The book counsels appropriate Meditation and Yoga exercises, besides orientation in personal and social awareness of his disease. Thus, the book catalogues and identifies the diseases, and shows the different ways and means of cures for them, based on the practice of Allopathy, Ayurveda and Homeopathy, of course, topping up with the knowledge of Meditation, Yoga, awareness of diseases and their preventions.

The book being extensive in its perspective, is reluctant to be intensive. Nevertheless, it is indispensable for any medical practitioner since it serves as a directory of diseases and cures. I wish the authors all success, and I hope the medical world will appropriate indigenous solutions to Indian health problems.

Dr.M.Ramanathan ,M.S.,F.R.C.S , Vice –Chancellor, Annamalai University Tamil Nadu , India. GROWING

#### **Preface**

#### WHAT IS THE USE OF THIS BOOK:

This book is written with the intension of providing ready information for the physician in effective management of patient. A to Z means this book covering most of the common and as well as uncommon diseases. Cocktail therapeutic means utilizing all systems of medicine in treatment of patients for maximum benefit. This guide provides most of the information necessary for more meaningful practice. But the blending of various systems of medicine is based on the Over all condition of the patients and discretion as per the situation of the physician. The purpose of combining all systems of medicine includes:

- The focus is on the whole person -- physical, emotional, social, and spiritual aspects.
- To Prevent illness and complications.
- To treat the patients in an individualized manner to achieve maximum benefit.
- To eliminate causes of illness rather than its symptoms.
- To support natural healing processes of the body.

Every system of medicine has its own merits and demerits. Where they are blended in optimum preparation, the merits will be maximized and demerits will be minimized. Of course, the physician designs the blending of various modalities based on individual patient needs and feasibility. In addition to modern medicine, based on scientific evidence, Complementary and Alternative Medicine (CAM), which has been evolved through many centuries based on experience, if combined, will be more beneficial with least side effects. CAM therapies into five major groups:

Alternative Medical Systems: built upon complete systems of theory and practice.
 Examples include homeopathy, naturopathy, traditional Chinese medicine (TCM),
 Ayurveda and Siddha.

 Biological Medicine: use of substances found in nature, such as herbs, foods, and vitamins to promote health.

Energy Medicine: involves the use of energy fields to promote health. Some forms of
energy medicine (known as biofield therapies) are designed to influence energy fields
that are believed to surround and penetrate the human body. Examples of biofield
therapies include qi gong, Reiki, and Therapeutic Touch. Other forms of energy
medicine (known as bioelectromagnetic-based medicine) involve the use of
electromagnetic fields, such as electroacupuncture.

Manual Medicine: based on manipulation and/or movement of one or more parts of the body. Examples include osteopathy, physical therapy, massage, chiropractic, Feldeinkrais, and reflexology.

 Mind-Body Medicine: uses a range of techniques that help boost the mind's ability to influence bodily functions and symptoms. Examples include biofeedback, deep relaxation, guided imagery, hypnotherapy, meditation, prayer, support groups, and yoga.

This book gives information collected from various authentic sources and not based on our experience. The readers can get more scientific information if they want from references given. The comments and suggestions from the readers are most welcome in a view of implementing quality and relevance of this book. We also request you to share your experience for the benefit of every one.

## How to use this book Homoeopathic remedies

- The remedy should be taken in a clean mouth, i.e. having consumed nothing other than water for 30 mins before taking the remedy, and for 30 mins afterwards includes toothpaste.
- Try not to handle the medication...if possible dip it into the container and consume directly, or use a clean teaspoon to remove tablet from plastic wallet.
- Suck the remedy until it has dissolved in your mouth.
- Advised to avoid caffeine, nicotine and alcohol when taking homoeopathic remedies.
- To avoid taking painkillers or anti-inflammatory medications while taking homoeopathic remedies.

Professional homeopaths, however, may recommend one or more of the following treatments for diverse diseases based on their knowledge and clinical experience. Before prescribing a remedy, homeopaths take into account a person's constitutional type. In homeopathic terms, a person's constitution is his or her physical, emotional, and intellectual makeup. An experienced homeopath assesses all of these factors when determining the most appropriate remedy for a particular individual. In addition to following these important treatment steps, certain lifestyle and dietary changes may help prevent or improve symptoms of diseases. Plus, acupuncture therapy brings significant relief to many people who have pathology, as does homeopathy. Internally, the dose is usually 3 to 5 pellets of a 12X to 30C remedy every one to four hours until the symptoms get better.

#### Herbs

Herbs may be used as dried extracts (capsules, powders, teas), glycerites (glycerine extracts), or tinctures (alcohol extracts). Unless otherwise indicated, teas should be made with 1 tsp. herb per cup of hot water. Steep covered 5 to 10 minutes for leaf or flowers, and 10 to 20 minutes for roots. Drink 2 to 4 cups per day. The use of herbs is a time-honored approach to strengthening the body and treating disease. Herbs, however, contain active substances that can trigger side effects and interact with other herbs, supplements, or medications. For these reasons, herbs should be taken with care and only under the supervision of a practitioner knowledgeable in the field of herbal medicine.

## 5 Steps Plan for Healthy and Long Life

## Nothing Worthwhile is Ever Accomplished Without A Plan!

## Longevity Experts 5 Steps Plan for Long Life:

#### 1. Diet

- Eliminate Refined Sugars (reduce glycemic load)- use Stevia (a sweetener without sugar) that is actually good.
- Avoid coffee, drink green tea, which has one quarter of the caffeine and has a calming effect and has powerful anti-oxidants.
- Reduce or eliminate the following foods from diet: **Dairy Products** 
  - Bad fats (found in cooking oils, margarine and shortening, these encourage inflammation, a major contributor to heart disease).
  - Meats and large fish (like tuna and shark) have build ups of mercury, hormones, antibiotics, pesticides and other contaminates especially the fat.
- Increase intake of these foods: good fats, found in fish, flaxseed, "extra virgin" olive oil, nuts, or supplements like fish oil. These inhibit inflammation
- Vegetables (especially green leafy and colorful) and small quantities of fruits.
- Restrict caloric intake and increase fiber.
- Swallow 5-7 whole peppers in empty stomach and drink a glass of water in the morning everyday. It will detoxify harmful chemicals and enhance the absorption of

Oil pulling: Measure 10 ml. of refined sunflower oil, gingili oil or groundnut oil (approximately one table spoon) and without any great effort or hurry, wash and suck the oil inside the mouth like using a mouthwash. Never gargle or swallow the oil. Pull the oil through the teeth often and this oil will pull all the toxins from body through saliva.

#### **Nutritional Supplementation**

- Cooking, storage and preservation decrease nutrients in foods.
- It is a personal, educated decision that each person must make as to what daily supplements to intake.
- Increase intake of anti-oxidants.

## **Avoidance of Chemical Contamination**

- Stop Smoking and avoid second hand smoke.
- Reduce alcohol consumption and eliminate recreational drugs.
- Purify the air in house with a high quality air cleaner and remove chemical producing items especially cleaning agents, use vinegar and water instead.
- Purify the water you put into body.
- Drink and store foods and beverages in glass, not plastic.

#### 2. Exercise for Body

- "Target pulse rate" for 10-20 per Minutes Best: Fast walking 5-7 Times a Week – it is safe and effective.
- Weight Resistance Exercise 4 upper body and 4 lower body exercises 3 times a week.
- Keep the brain active
- Mentally challenge yourself, in the workplace, study, games, etc.
- Combine physical with mental: Games like table tennis provide physical activity, hand and eye co-ordination as well as forcing the brain to make decisions in a fraction of a second.

#### 3. Exercise for Mind

#### **Stress Reduction**

- Don't be angry.
- Be a friendly person with a smile.
- Work hard and allow time to relax.
- Get plenty of sleep, for most people that are 8 hours each night.
- Consider use of techniques of quietness, either by personal breathing and quietness and visualization or use biofeedback or learn Yoga or meditation.
- Other relaxations therapies include: listening to music, massage, aromatherapy, and acupuncture.
- Exercise also reduces stress.
- Have a loving relationship with another human being.

#### Compassion

- Really care about the world; the world will take care of you.
- Do something daily to make the world better and it makes your life better.
- The Golden Rule: Do unto others as you would do unto yourself.

#### Change Your Thinking: Confidence - Discipline - Believe

- Open your mind to possibilities.
- Have the personal discipline to carry out your plan.
- Walk with your head high and believe in yourself.
- The power to change is within yourself.
- If you believe it you can do it.

#### 4. Exercise for Soul

- Do Kayakalpa or Kegel exercise daily (developed by Vethathri Maharishi).
- Minimize the frequency of intercourse (monthly twice is better).
- Optimize the thoughts.
- Increase putative energy fields by Reiki and Johrei, both of Japanese origin, Qi gong, a Chinese practice, Healing touch, Intercessory prayer, light and mirror exercise-Simplified Kindling Yoga.

## 5. Spread the Knowledge!

- Spread the knowledge you have gained for the benefit of others as a token of gratitude to your forefathers without whom you would have become as you are.
- Tell others about the concept of Life Extension.
- It is a difficult subject to discuss and you should not push your ideas on anyone, just spark their interest.
- Help advance technological breakthroughs by contributing your time, talent, or through donations.

Be a Healer, Not just a Physician.

With Prayers

Dr. S. Sethupathy and Dr. C. Chandrasekaran.

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"Energy of mind is essence of life"

-Aristotle.

Acne is a skin condition that affects areas containing the largest oil glands, including the nose, forehead, cheeks, chin, back, and trunk. It is caused by a disorder of the oil glands that results in clogged pores and outbreaks of lesions commonly known as pimples. Males are more likely to get acne and tend to have more severe cases than do females. It is most common in adolescents and it generally disappears by age 30. Severe acne can be painful and may cause permanent scarring and emotional distress that can be associated with it.

#### Signs and Symptoms

There are various types of acne lesions:

- Comedone general term for an enlarged hair follicle plugged with oil and bacteria.
- Open comedone (blackhead) a plugged follicle that reaches the surface of the skin. Although dark in appearance, blackheads do not indicate the presence of dirt.
- Closed comedone (whitehead) a clogged follicle that stays beneath the skin. Whiteheads usually appear on the skin as round, white bumps roughly 1to2 mm in diameter.
- Papules inflamed lesions that appear as small, pink bumps on the skin
- Pustules (pimples) inflamed pusfilled lesions that are red at the base
- Cysts and nodules large, inflamed, pus-filled lesions that are lodged deep and can drain, causing

pain and scarring

Lesions can cause scars ranging from small, depressed pits to large elevated blemishes, depending on the severity of the condition and the individual's skin type.

#### Causes

During adolescence, rising hormone levels are thought to increase the number of oil glands and the amount of sebum they produce. The increased production of sebum causes blockage of hair follicles, leading to the formation of small bacteria-filled cysts called comedones. If these comedones

remain intact and no not rupture, they can progress into open comedones (whiteheads) or closed comedones (blackheads). When comedones rupture, an inflammatory reaction occurs and can spread into the surrounding tissue. Papules, pustules, cysts, and nodules are all forms of inflammatory lesions.

#### Risk Factors

The following may cause or worsen acne:

- Family history of acne
- Greasy/oily cosmetic or hair products containing vegetable or animal fats
- Hormonal changes associated with adolescence, pregnancy, or menstruation (acne tends to flare up 2 to 7 days before menstruation begins)
- Certain medications such as corticosteroids, androgens, oral contraceptives, lithium, halogens, isoniazid, phenytoin, phenobarbital, and high levels of iodine (such as from kelp)
- Environmental irritants such as industrial cutting oils, tar, wood preservatives, sealing compounds, and other pollutants
- Sweating and friction, such as from headbands, back packs, bicycle helmets, or tight collars
- High levels of humidity
  - · Squeezing and picking comedones

#### Diagnosis

A complete medical history that includes questions about skin care, cosmetic use, and diet; factors that trigger flare-ups; medication use; occupational and environmental exposures; and prior treatment is required. Examine the face, chest, back, and other areas for blemishes, lesions, and scars. Several factors like including the size of the blemishes and whether or not they are inflamed help to determine the most appropriate treatment.

#### **Treatment Approach**

The main goals of acne treatment are

To prevent scarring,

- To reduce the number of painful lesions and minimize the stress
- Skin care by washing the affected area one to two times per day with a mild, nondrying soap.
- Avoid frequent washing and the use of harsh soaps
- Topical medications: Benzoyl peroxide or retinoids
- Facial steaming with accompanying manual extraction of the comedones s by a professional aesthetician

Herbs, Ayurveda, Homeopathy, or Mind/body adopted for at least 6 to 8 weeks to have a noticeable improvement

## Medications Topical

- Benzoyl peroxide Benzoyl peroxide should not be applied along with topical retinoids. First apply to forearm and observe the area for reactions two to three days then can be applied to the face.
- Retinoids —For individuals with significant numbers of both open and closed comedones as well as papules and pustules. Side effects may include redness, peeling, and photosensitivity so better applied at night.
- Antibiotics —Topical antibiotics such as clindamycin or erythromycin can be used to treat mild to moderate acne.

A combination of topical medications and topical antibiotics can be tried. Oral antibiotics can be started for moderate to severe acne.

- Antibiotics may include doxycycline, minocycline, and tetracycline.
- Isotretinoin is prescribed for individuals with severe, inflammatory acne that does not improve with other medications. Isotretinoin is taken twice a day for 20 weeks.

## Surgery and Other Procedures

Individuals with severe acne scars may require surgery such as skin resurfacing techniques (dermabrasion-uses a rapidly rotating brush to remove acne scars or pits) or chemical peeling (a chemical solution is applied to the skin that causes it to blister and eventually peel off). Dermatological surgeons can also perform scar excisions (a

technique in which the scar is removed and the surrounding healthy skin is joined together) and punch grafting (a method in which the scar is punched out and replaced it with a small plug of new skin).

## Nutrition and Dietary Supplements Nutritional Therapy:

Natural and alternative therapies for acne reduce inflammation and infection; while others use herbal or dietary measures to mitigate factors such as stress that exacerbate acne. For mild or moderate acne, these approaches may make sense, but more recalcitrant acne conditions respond more slowly to any therapy, "natural" or medical. Treatment sometimes takes a year to produce results. In more severe acne, vitamin, mineral, and herbal supplements complement conventional medical treatment.

#### Vitamin A

Vitamin A, including oral vitamin A, reduces sebum production and hyperkeratosis of sebaceous follicles. Retinol is effective in treating acne.

#### Vitamin B6

Vitamin B6 aids in hormone metabolism. It is effective for women with premenstrual acne. A typical dosage is 50 to 100 mg daily.

#### Vitamin E

Vitamin E, an antioxidant, helps protect against lipid peroxidation of sebum and benefits acne. A suitable dose is 200 to 400 IU daily. Vitamin E may diminish scarring.

#### Lipoic Acid

Lipoic acid can heal acne scars. Lipoic acid activates a transcription factor known as AP-1, which produces enzymes called metalloproteinases. These enzymes digest damaged collagen; erasing wrinkles and scars. Lipoic acid produces energy in mitochondria, making it available for healing.

#### MSM

Methylsulfonylmethane (MSM) is a natural sulfur compound found in all living things. Sulfur is one of the more prominent elements in our bodies. MSM can mediate hormone balance and detoxify skin. Daily dosages of 2000 to 5000 mg are without side effects.

#### Zinc

Nutritionists generally suggest zinc because of its role in processing hormones. A 50-mg

zinc supplement taken once or twice daily may reduce inflammation and heal damaged skin. Studies indicate that the mineral zinc may be an effective treatment for inflammatory acne. Zinc gluconate {60 to 90 mg} daily for two months will have a significant reduction in the number and severity. In addition, certain topical medications containing Zinc oxide may contribute to the effectiveness of the product. A topical lotion of 1.2% zinc and 4% erythromycin reduced sebum output beginning about the third week, with improvements continuing into the ninth week.

#### Chromium

The more sugar we consume, the more chromium we need. Most people (Indians) consume too much dietary sugar and are at risk for chromium deficiency. high Chromium induced rapid improvement in acne patients, as did chromium-rich yeast supplements. Chromium supplements are effective in acne treatment and may be through improved glucose mediated metabolism. Chromium is given as an oral supplement or by injection directly into an acne lesion. Patients given 400 mcg of chromium in the form of yeast had rapid improvement. Chromium skin recommended supplementation is treatment of impaired glucose tolerance, elevated blood cholesterol and triglyceride levels, promotion of weight loss, and acne. Chromium picolinate or polynicotinate are preferred forms of chromium. These forms are better assimilated by the digestive system. Other sources of chromium are brewer's yeast and molasses.

#### **Essential Fatty Acids**

It is thought that a relatively high sebum concentration of linoleic acid (a dietary omega-6 fatty acid) protects small children from acne. As androgens increase in adolescence, more sebum is produced and the relative proportion of linoleic acid decreases. Acne patients have abnormally low linoleic acid in their skin oils. Corn oil supplementation has been successful in acne. A reasonable corn oil dose is 1 tablespoonful daily. Nutrients benefiting the skin include fiber-rich foods, beta-carotene, vitamin C, calcium, selenium, silica, B vitamins, biotin, olive oil, cod liver oil, protein, and amino acids.

#### Skin Hydration

Water is vital to health because almost all biological reactions require water. Health professionals advise drinking eight 8-ounce glasses of water daily to improve circulation by making blood less viscous, thus opening blood vessels. Without adequate hydration, the body cannot effectively flush waste and disease-causing toxins from the body. Water maintains proper functioning of proteins, enzymes, and connective tissues.

#### Herbal Therapy

Some herbs heal the skin, soothe inflammation, and relieve itching. Chinese herbalists recommend Echinacea, calendula, tea tree oil, and goldenseal tincture or blue (which works with Echinacea). Drinking teas made from nettles and cleavers tincture may be effective and Bittersweet nightshade (Solanum dulcamara) is approved by the German Commission E for acne and other skin disorders and can be used internally and externally. When emotional stress triggers acne, a cup of lavender or chamomile tea can aid relaxation. A steaming facial treatment with these herbs may help when used two or three times weekly.

## **Natural Topical Products**

Manufacturers have special products that use herbs and natural substances to treat acne. A search of the Web will reveal many natural products for skin care and acne treatment, ranging from facial scrubs and moisturizers to antiseptics and facial masks. Natural ingredients in various topical treatments for acne include:

#### Skin healing:

Gels contain lipoic acid, carnosine, methylaminoethanol, collagen, protein, and vitamins A, C, and E. These ingredients repair damaged tissue and mitigate free-radical damage.

#### Inflammation and redness:

Creams contain chamomile, cat's claw, and geranium extract to reduce inflammation from infection or irritating topical medications.

#### Cleansers:

Facial washes contain fruit and vegetable extracts, such as lemon, apricot, and cucumber; and herbal extracts, such as ginseng, green tea, and gingko, for deep pore cleansing.

#### Antibacterial/antifungal:

Tea tree oil, Echinacea, and white willow bark contain antiseptics that kill microbes. Calendula and the related marigold possess antibacterial activity.

#### **Astringents:**

Witch hazel, herbal extracts, citrus seed extracts, and calendula remove excess facial oil.

#### Facial masks:

Seaweed extract and bentonite clay (a combination of montmorillonite and volcanic ash) pull oils and toxins from the skin may be beneficial.

#### Herbs

Calendula (*Calendula officinalis*) German chamomile (*Matricaria recutita*)

Witch hazel (Hamamelis virginiana)
Licorice root (Glycyrrhiza glabra)
Flaxseed (Linum usitatissimum) and
flaxseed oil

#### Tea Tree Oil

Preliminary evidence suggests that tea tree oil (*Melaleuca alternafolia*) may have ant microbial effects

#### Acupuncture

Auricular and electroacupuncture therapies may reduce the symptoms of acne.

#### Homeopathy

Belladonna— for people who experience flushes of heat to the face or who have inflamed pustular acne that improves with cold applications

Calendula— for skin conditions involving pustules or blisters

Hepar sulphur— for painful, pus-filled acne Kali bromatum— for deep acne, especially on the forehead, in persons who are chilled and nervous

Silicea— for pustules or pit-forming acne

## Mind/Body Medicine

## Biofeedback and Cognitive Imagery

Emotional stress can worsen acne, so it is possible that relaxation therapies such as biofeedback together with cognitive imagery may improve acne symptoms. Biofeedback is a technique in which an individual is trained to control certain internal bodily processes that normally occur involuntarily, such as heart rate and muscle tension. During biofeedback training, an individual participates in a relaxation technique, such as guided imagery; Guided imagery involves the

formation of mental pictures to promote a variety of favorable physical and emotional effects. This combination of biofeedback and cognitive imagery allows the person to visualize and understand the bodily changes that occur when he or she changes from being tense to being relaxed.

#### **Hypnosis**

Hypnosis may enhance the effectiveness of treatments for a variety of skin conditions including acne. An individual become more relaxed and, as a result, may positively influence the activity of hormones and the immune system

#### Ayurveda/Siddha

Sunder Vati, significantly reduced the number of both inflammatory and non-inflammatory lesions. The herbs in the Sunder Vati preparation include:

Ginger (Zingiber officinale)
Holarrhena antidysenterica
Embelia ribes

#### Kampo

Keigai-rengyo-to (TJ-50), a Japanese Kampo medicine, may be effective in the treatment of acne. The formulation contains 17 herbs, including:

Skullcap root (Scutellaria lateriflora)
Licorice root (Glycyrrhiza glabra)

Mint (Mentha arvensis)

Angelica root (Angelica archangelica)

Peony root (Paeonia lactiflora)

#### Lifestyle

- Overexposure to the sun can worsen acne.
- Use cosmetics sparingly.
- Wash face gently with unscented, oil-free cleansers and keep skin clean.
- Do not squeeze, scratch, or pick at pimples.
- Young men with acne should use a new razor blade every time.
- Avoid alcohol-based aftershaves.
   Use herbal alternatives.
- Eliminate foods high in fat, hormones, and iodine.
- Eat a range of whole raw, natural foods. Avoid processed foods.
- Drink adequate water and green tea.

#### **Other Considerations Pregnancy**

Pregnant women should avoid all retinoids (oral and topical), isotretinoin, and the antibiotics tetracycline, minocycline,

doxycycline because they can be harmful to the fetus. The antibiotic erythromycin is safe during pregnancy.

**Prognosis and Complications** 

Permanent scarring - cosmetic problem Squeezing lesions can rupture comedones and cause inflammation. Symptoms generally diminish after adolescence and disappear by age 30.

#### 2.Alcoholism

"Mind healing is an universal remedy for diverse diseases"
-Thirumoolar.

Alcoholism is a chronic, often progressive disease in which a person continues to crave for alcohol and drink despite repeated alcohol-related problems (like losing a job or getting into trouble with the law). Teen drinking (between the ages of 14 and 17) is on the rise due to trouble at school, at home etc. This contributes to more than 50 percent of car and industrial fatalities, drowning, and child or domestic abuse.

#### Signs and Symptoms

- Craving for alcohol
- Inability to control drinking habits
- Withdrawal symptoms, such as nausea, sweating, shakiness, and anxiety, when alcohol use is stopped
- Tolerance (the need for increasing amounts of alcohol in order to feel its effects)
- Psychological, social, and occupational dysfunction
- Malnutrition, weight loss, and poor appetite
- Repeated infections—for example, urinary tract infections or pneumonia
- Lung conditions—complicated by smoking
- Central nervous system disorders—
  unsteady gait or stance; cognitive
  impairment; psychiatric
  manifestations (for example,
  depression, mood swings, anxiety,
  or psychotic behavior); blackouts;
  coma
- Impaired concentration and performance at school and work
- Bad judgment for example, engaging in risky sexual behavior or driving while drunk

- Irritability, hostility, even aggression
- Sleep disruptions
- Diarrhea, vomiting, gastrointestinal bleeding
- Men—increased sexual drive with decreased ability to maintain an erection
- Women—miscarriage, stopping of menstrual periods
  - Inflammation of the pancreas
  - Liver disease
  - Poor wound healing
  - Buildup of fluid in the body
  - Hypoglycemia (low blood sugar)
  - Hypothermia (reduction of body temperature)

#### **Risk Factors**

If you have a family history of alcohol abuse, you are more likely to develop the condition than someone without a family history. Other factors that may increase your risk include:

- Having more than one to two drinks per day
- Smoking cigarettes
- Starting to consume alcohol at an early age
- Being under a lot of stress
- Having a preexisting psychiatric disorder

#### Diagnosis

- History and a thorough physical exam for specific organ damage are required.
- Find out whether the patient drinks in the morning or early in the day to soothe a hangover, get the day started, or get rid of the shakes?

Liver function tests will be done to see if there has been damage to liver from alcohol. Imaging techniques may be used to look for alcohol-related damage to bones or other organs.

#### **Preventive Care**

- Stay involved and interested in your teenager's life.
- Talk openly to your children, especially pre-teens and teens, about the widespread presence and dangers of alcohol and drugs.
- Have clear, non-negotiable rules about NOT using alcohol and drugs.
- Act as a role model DON'T drink excessively, use other drugs or smoke.
- Strongly urge your children to NOT smoke.
- Encourage your children to become active in sports, music, the arts, or other activities.
  - Know where your children and teens are at all times and make sure that there is always appropriate adult supervision.
  - Monitor teenager for aggressive behavior, feelings of anger or depression, and poor school performance. If any of these develop, consider whether alcohol may be a reason.

#### Treatment Approach

Treatment must address both existing medical issues and rehabilitation, such as motivational techniques for abstaining from drinking, psychotherapy, and Alcoholics Anonymous. For rehabilitation, referred to as "recovery" or staying sober, there are both outpatient and inpatient programs available.

#### Lifestyle

- Attend Alcoholics Anonymous.
- Family members should attend Al Anon to learn how best to help the person with the addiction and to get help and support himself or herself.
- Exercise regularly to help reduce cravings.
- · Quit smoking.

#### Medications

The following medications can be prescribed.

 Tranquilizers called benzodiazepines are used during the first few days of treatment to help

- with safe withdraw from alcohol. Alcohol withdrawal can be lifethreatening; therefore, inpatient treatment may be necessary.
- Antipsychotic medications for people who do not respond to benzodiazepines
- Naltrexone, used in combination with counseling, may lessen the craving for alcohol and help prevent a return to drinking. It is only used after detoxification – that is, once you are no longer physically addicted to alcohol.
- Disulfiram, an older medication, which discourages drinking by causing nausea, vomiting, and other unpleasant physical reactions when alcohol is used.
- Medications for specific organ damage or for symptoms associated with alcohol withdrawal.
- Metadoxine accelerates the normalization of liver function tests and ultrasonograpic changes, even in those who do not completely abstain from alcohol.

## **Nutrition and Dietary Supplements**

- Eliminate simple sugars.
- Increase complex carbohydrates.
- Consume adequate protein.
- Increase essential fatty acids.
- Decrease saturated fats and fried foods.
- Avoid caffeine.

Potentially beneficial supplements include vitamin B complex, vitamin C, selenium, magnesium, the amino acids S-allyl-cysteine and zinc. A combination of glutamine, carnitine and glutathione – may help reduce cravings, blood sugar fluctuations, and stress related to alcohol use.

#### Thiamine (vitamin B1)

Thiamine deficiency can lead to a brain disorder called Wernicke-Korsakoff syndrome. Replacing thiamine alleviates the symptoms of this syndrome. Wernicke-Korsakoff is actually two disorders in one: (1) Wernicke's disease which involves damage to nerves in the central and peripheral nervous systems and is generally caused by malnutrition associated with habitual alcohol abuse, and (2) Korsakoff

syndrome which is characterized memory impairment along with symptoms of nerve damage. High doses of thiamine improve confusion and muscle coordination but rarely improves the memory loss.

Gamma-aminobutyric acid (GABA)

Brown rice extracts rich in GABA seems to protect animals from the liver-damaging effects of alcohol.

#### Pro-pre biotics

Along with taking a probiotic formula, a supplement to nourish intestinal flora such as fructo-oligosaccharides (FOS) is recommended. FOS helps reduce the formation of toxic liver metabolites and therefore is beneficial to people with chronic liver problems.

Polyenylphosphatidylcholine (PPC)

The administration of PPC has been shown to provide significant protection against certain forms of alcohol-induced liver injury in animals via several unique mechanisms

#### Evening Primrose oil (EPO)(Oenothera biennis)

The main active ingredient of EPO is gamma-linolenic acid (GLA), an omega-6 fatty acid that can also be found in borage and black currant oils.

Ginseng

(Panax Asian ginseng American and ginseng quinquefolium and Panax alcohol may help treat respectively) intoxication by speeding up the metabolism and clears alcohol from body more quickly. In addition, Asian ginseng may reduce the amount of alcohol that is absorbed from the stomach.

Milk Thistle (Silybum marianum)

People with the mildest form of alcoholrelated liver damage seem to improve the most with Silvmarin.

St. John's Wort (Hypericum perforatum) Researchers have considered whether St. John's Wort, often used to treat depression, may help reduce alcohol consumption.

Garlic

It contains S-allyl-cysteine, a neutralizer of acetaldehyde, an analogue of the dietary amino acid cysteine, binds acetaldehyde, thus preventing its damaging effect on physiological proteins.

#### Others

Additional herbs that an herbal specialist might consider to support you while treatment for alcoholism undergoing include:

- Dandelion (Taraxacum officinale): Traditionally used for liver-related problems and as a nutritional rich support because it is vitamins and minerals. Tends to work well with milk thistle.
- Skullcap (Scutellaria lateriflora): Traditionally used for tension and anxiety, this herb may help ease the withdrawal process.

#### Homeopathy

- Arsenicum album for anxiety and compulsiveness, with nausea, vomiting, and diarrhea
- Nux vomica for irritability and compulsiveness with constipation, nausea, and vomiting
- Lachesis for cravings for alcohol, difficulty headaches, and swallowing
- Staphysagria for angry individuals who tend to suppress their emotions may have been abused and physically, sexually, psychologically in the past

Mind/Body Medicine

therapy Cognitive-behavioral psychologist or psychiatrist is a very effective treatment approach for alcohol addiction.

#### Acupuncture

Acupuncture has shown potential as an effective treatment for addiction. In the case of alcoholism, a qi deficiency is usually detected in the liver meridian, while the gallbladder meridian tends to contain excess gi. In addition to performing needling treatment, acupuncturists may employ other methods such as moxibustion (a technique in which the herb mugwort is burned over acupuncture points). Auricular acupuncture may be particularly beneficial.

#### **Traditional Chinese Medicine** Kudzu (Pueraria lobata)

More studies are needed to determine whether it is safe and effective or not.

#### Other Considerations Pregnancy

Drinking alcohol while pregnant seriously damage the fetus by causing failure to grow, reduced IQ, or malformed facial features.

## **Prognosis and Complications**

- Mental confusion or delirium
- Severe amnesia
- An unsteady gait
- Loss of sperm cells
- Repeated vomiting, ulcers, gastrointestinal bleeding
- Pancreatitis

In addition, long-term use of alcohol decreases life expectancy by about 15 years and puts you at significant risk for:

- Liver damage, even liver failure (cirrhosis)
  - High blood pressure, heart disease, and heart failure
- Brain and nerve damage
- Certain types of cancer including oropharyngeal, laryngeal and breast
- Osteoporosis
- Nutritional deficiencies
- Infections, including pneumonia and tuberculosis

## 3. Allergic rhinitis

"Food is medicine; Medicine is food"
-Siddhars.

Allergic rhinitis is an allergic reaction to airborne particles that primarily affects the nose and eyes. There are two types of allergic rhinitis: seasonal allergic rhinitis (hay fever) and perennial allergic rhinitis, which occurs year-round. Many people who have allergic rhinitis also have asthma.

#### Signs and Symptoms

- Stuffy, runny nose; discharge is generally thin and clear
- Sneezing
- · Post-nasal drip
- · Red, itchy, and watery eyes
- Swollen eyelids
- Itchy mouth, throat, ears, and face
- Sore throat (called pharyngitis)
- Dry cough
- Feelings of fullness and buzzing in the ears (called tinnitus)
- Headaches
- Partial loss of the senses of hearing, smell, and taste
- Fatigue
  - Dark circles under the eyes

#### Causes

In allergic rhinitis, the immune system overresponds to substances that harmless to most people - like pollen, mold, and pet dander - and launches an assault. In allergic reaction. an substances like histamine are released. Histamines contribute to the symptoms of allergic rhinitis. Seasonal allergies may be due to

- Grasses
- Trees
- Fungus (mold growing on dead leaves)

Year-round allergic rhinitis is caused by an allergic reaction to airborne particles from the following:

- Animal dander (skin flakes)
- Dust and household mites
- Cockroaches
- Molds growing on wall paper, house plants, carpeting, and upholstery

#### Risk Factors

- Family history
- Having other allergies, such as food allergies or eczema
- Exposure to second hand cigarette smoke

#### Diagnosis

Examine nose and nasal secretions. Skin testing is the most common method of allergy testing. This may include scratch, patch, or other tests. In a scratch test, for example, small amounts of suspected allergens are applied to the skin with a needle prick or scratch. If there is an allergy, a hive (swollen reddened area) forms within about 20 minutes. No antihistamines for at least 12 to 72 hours before the test. Occasionally, the suspected allergen is dissolved and dropped onto the lower eyelid of the eye as a means of testing for allergies.

## Preventive Care

- Stay indoors, and if possible, close the windows
- Use an air conditioner
- Avoid using fans that draw in air from outdoors
- Avoid air drying your clothes
- Bathe or shower and change your clothes after being outside

#### If you have perennial allergic rhinitis:

- Cover your pillows and mattress with dust mite covers
- Use an air purifier
- Avoid pets and other triggers

#### **Treatment Approach**

The best way is to avoid exposure to allergens and exposure may be minimized. The imbalance of adrenal hormones under conditions may weaken stressful immune response. Drug therapies (such as antihistamines, decongestants, and nasal corticosteroid sprays) may be used to control the mild to moderate symptoms and certain complementary alternative therapies may also be used to successfully treat the symptoms of allergic rhinitis. occasionally is Desensitization recommended. The aim of desensitization is to gradually accustom the immune system to the allergen so that it no longer reacts to that substance. This is done very slowly and carefully, starting with minute amounts of the substance, in a controlled setting. In addition to following these important treatment steps, certain lifestyle and dietary changes may help prevent or improve rhinitis. symptoms of allergic acupuncture therapy brings significant relief to many people who have allergic rhinitis, as does homeopathy

#### Lifestyle

- Choose air conditioning over window fans
- Avoid working with compost, raking leaves, or walking through uncut fields

For perennial allergic rhinitis, you can take the following measures. To reduce mold:

 Clean moldy surfaces. Mold is often found in air conditioners, humidifiers, dehumidifiers, swamp coolers, and refrigerator drip pans

- Reduce indoor humidity to less than 50% using air conditioners and dehumidifiers
- Fix water leaks and clean up water damage
- Put windows in or otherwise ventilate kitchens, bathrooms, and crawl spaces; vent laundry dryers to the outside
- Put flooring in crawl spaces
- Avoid carpets and upholstered furniture
- Wash bedding every week in hot water
- Keep stuffed toys out of the bedroom
- Encase pillows and beds with allergen-proof covers

#### Medications

Medication is recommended based on the type of allergic rhinitis. Perennial allergic rhinitis may require daily medication, and if the patient has seasonal allergic rhinitis he may be advised to start medications a few weeks before the pollen season.

#### **Preventive Agents and Methods**

- Anti-inflammatory agents— prevent severe allergic rhinitis; examples include nasal corticosteroid (steroid) sprays, leukotrieneantagonists (namely, zafirlukast and montelukast), and nasal cromolyn
- Antihistamines—relieve sneezing and itching; may prevent nasal congestion before an allergy attack

## Decongestants

- Oral decongestants-commonly contain the active ingredient pseudoephedrine; side effects, such as nervousness, drowsiness, blood pressure changes, are more likely with oral than nasal decongestants
- Nasal decongestants-applied directly into the nasal passages with a spray, gel, drops, or vapors; available as long-acting (6 to 12 hours) or short-acting; work faster than oral decongestants and with fewer side effects. With extended use, nasal decongestants can cause the nasal passages to swell, and this can begin a cycle of dependency. Avoid using nasal decongestants for more than 3 days in a row, unless

required and in case of emphysema or chronic bronchitis.

## **Additional Treatment for Itchy Eyes**

- Antihistamine eye drops-relieve both nasal and eye symptoms; examples include azelastine, olopatadine, ketotifen, and levocabastine
- Decongestant eye drops-such as phenylephrine and naphazoline
- Combination antihistamine/decongestants

Eye drops may cause stinging or even headache.

#### Surgery and Other Procedures

Immunotherapy is recommended to anyone 7 years and older who has severe allergy symptoms or who also has asthma. And it has the following advantages:

- Specific allergens are targeted
- Sensitivity may be reduced in airways in the lungs as well as in the upper airways
- New allergies in children may be less likely to develop
- Asthma in children with allergies may be less likely to develop

**Nutrition and Dietary Supplements** 

In case of any food allergies, eliminate them. Avoid meats, full fat dairy products, sugar, and highly processed foods, which may improve their symptoms.

#### Bromelain

Bromelain supplements may help suppress cough, reduce nasal mucus associated with sinusitis, and relieve the swelling and inflammation caused by hay fever. This supplement is often administered with quercetin.

## **Essential Fatty Acids**

People who are prone to allergies may require more EFAs GLA is found in spirulina and seed oils of evening primrose, black currant, borage, and fungal oils. In terms of dietary changes relative to EFAs he has to eat foods rich an omega-3 fatty acids (such as cold-water fish, flaxseeds, and walnuts). And restrict foods with omega-6 fatty acids (found, for example, in egg yolks, meats, and cooking oils including corn, safflower, and cottonseed,) may reduce allergy symptoms in general. This is omega-3 fatty acids because decrease inflammation while omega-6 fatty acids (other than GLA) tend to increase inflammation.

#### Lactobacillus Acidophilus

L. acidophilus is thought to lower the risk of allergies, including allergic rhinitis.

#### N-Acetylcysteine

Taking an NAC supplement may help reduce symptoms of allergic rhinitis.

#### Quercetin

Quercetin is a flavonoid, a plant pigment responsible for the colors found in fruits and vegetables. Quercetin inhibits the production and release of histamine. Quercetin was investigated for its ability to inhibit histamine release in IgE-mediated allergic responses. It works better when used in conjunction with bromelain.

#### Perilla fructescens and rosmarinic acid.

Perilla contains many active ingredients, such as rosmarinic acid and luteolin. Oral supplementation with perilla leaves or extracts of rosmarinic acid has been shown to suppress allergic reactions. Rosmarinic acid had potent immunosuppressive effects and inhibited both the activation and proliferation of T cells

#### Spirulina

Spirulina, an immune system stimulant, may protect against harmful allergic reactions by preventing the release of histamine.

#### Vitamin C

Vitamin C may reduce allergic rhinitis **CoQ10.** 

CoQ10 is essential for energy production in the mitochondria of cells. It is also a potent antioxidant. Studies have shown that people with allergies may lack CoQ10

#### Herbs

## Butterbur (Petasites hybridus)

Butterbur has been traditionally used to treat asthma and bronchitis and to reduce mucus. It is more effective and less sedating than cetirizine a non-sedating antihistamine.

## Echinacea (Echinacea angustifolia/ Echinacea pallida/ Echinacea purpurea)

Echinacea contains substances that enhance the activity of the immune system and reduce inflammation.

## Evening Primrose (Oenothera biennis)

This herb is considered by some to be a potential treatment for allergic rhinitis because it contains gamma-linolenic acid (GLA), an essential fatty acid that may relieve allergy symptoms.

## Goldenseal (Hydrastis canadensis)

Goldenseal is considered to be a natural antibiotic and antiseptic and a remedy for allergic rhinitis.

Stinging Nettle (Urtica dioica/Urtica urens)

Stinging nettle has traditionally been used for treating a variety of conditions, including allergic rhinitis.

## Green tea (Camellia sinensis)

several contains Green tea active such as flavonoids. constituents, polyphenols, catechins, and caffeine. Catechins such as epigallocatechin, epigallocatechin gallate (EGCG), epicatechin gallate are potent antioxidants. By studying mast cells that release histamine, researchers found methylated form of EGCG blocks the IgE receptor, which is involved in the allergic response

#### Others

Herbs used traditionally for allergies are:

- Astragalus (Astragalus membranaceus)
- Devil's claw (Harpagophytum procumbens)
- Goldenrod (Solidago virgaurea)
  - Licorice (Glycyrrhiza glabra)

#### Acupuncture

Treatment for allergic rhinitis may include needling and moxibustion (a technique in which heat from the burning of an herb called mugwort [Artemesia vulgaris] enhances the therapeutic effect of the acupuncture needles).

Homeopathy

- Nux vomica (poison nut) for stuffiness with nasal discharge, dry, ticklish, and scraping nasal sensations with watery nasal discharge and a lot of sneezing; an appropriate person for this remedy is irritable and impatient
- Arsenicum album (trioxide of arsenic)-for stuffiness with copious, burning nasal discharge and violent sneezing; an appropriate candidate for Arsenicum feels restless, anxious, and exhausted
- Allium cepa (raw onion)-for frequent sneezing, a lot of irritating nasal discharge and tearing eyes; this person tends to feel thirsty

 Euphrasia (eyebright)-for bland nasal discharge, with stinging, irritating tears; a suitable person for this remedy has worse nasal symptoms when lying down

## **Traditional Chinese Medicine**

#### Chinese Skullcap

Chinese skullcap (*Scuterllaria baicalensis*) has antioxidative, anti-inflammatory, and antihistamine properties. This is very useful for treating allergic rhinitis, particularly when used with stinging nettle.

#### Biminne

Biminne is a Chinese herbal formula used to treat allergic rhinitis. It is not known how biminne works, or is it safe to use for extended periods.

#### Ephedra

Ephedra (*Ephedra sinica*), called ma huang, has been used to treat nose and lung congestion and are potentially dangerous and addictive.

#### Other Considerations

Extended use of nasal sprays can make allergic rhinitis worse.

#### Pregnancy

During pregnancy and lactation, avoid the following:

- Decongestants
- High doses of vitamin C
  - Stinging nettle
  - Ephedra and ephedra alkaloids such as ephedrine
- Skullcap
  - Butterbur (Petasites) extracts
  - Goldenseal
  - Devil's claw
- Licorice

#### Warnings and Precautions

Echinacea may cause allergic reactions ranging from a mild rash to anaphylaxis People with asthma may be at an increased risk for developing these adverse reactions. If [patient is allergic to ragweed, avoid other plants in the Asteraceae family (including echinacea, feverfew, asters, chamomile, and chrysanthemums). Ephedra (ma huang) and ephedra alkaloids are associated with many side effects including irregular heart rhythm and stroke. Goldenseal should not be used in patients with high blood pressure. Skullcap has sedative properties, and should therefore be used with caution.

## Prognosis and Complications

Depending on the severity of the case, allergic rhinitis may be mildly disruptive to temporarily debilitating, resulting in missed days from school or work. Medication may cause drowsiness and other side effects and could also trigger other conditions such as

eczema, asthma, sinusitis, and ear infection. Seasonal allergic rhinitis may diminish as you age. Desensitization often requires years of treatment and is effective in about two-thirds of cases.

## 4.Alopecia

"There is no substitute for experience"

-Anonymous.

Alopecia is the absence or slowing of hair growth in an area of the body where hair formerly grew. It may be caused by physical damage to the hair itself or to the hair follicles, but it is most often the result of changes in the natural growth cycle of hair. In some types of alopecia, the growth cycle is disrupted by some temporary situation such as a chemical imbalance or stress. However, the vast majority (95 percent) of cases of hair loss in both men (male pattern baldness) and women (female diffuse baldness) are genetic in origin. This is called androgenetic alopecia.

#### Signs and Symptoms

- Male pattern baldness. Thinning or absence of hair at the hairline and top of the head.
- Female diffuse baldness. A gradual thinning of hair, especially on the top of the head. Hairline generally remains intact.
- Broken hairs, or hairs easily removed
  - One or more round or oval bald patches

## What Causes It?

Androgenetic alopecia is caused by a genetic tendency for certain hair follicles to produce a substance that reacts with male hormones. As man gets older, this reaction eventually causes the follicle to shut down. Female diffuse baldness progresses more slowly than male pattern baldness because of the small amount of male hormones in a woman's body. A hormone imbalance may make the problem worse.

Temporary hair loss may result from any shock to the body's systems, including starvation, systemic infection, childbirth, thyroid or immunological disorders, drugs (especially chemotherapy for cancer), or stress. Hair follicles can be destroyed permanently by scarring from burns, severe scalp infections, X-ray therapy, or skin disorders. Damage may also result from tight hairstyles over a long period of time, chemical treatments such as hair coloring or permanents, or the habitual pulling out of the hair. A fungal condition called tinea capitis ("ringworm of the scalp") also results in hair loss. The causes of alopecia areata, or patchy hair loss, are not well understood. It tends to happen in times of stress.

#### What to be done

If the cause of hair loss is uncertain, it is suggested to have thyroid function tests or a blood test to rule out immune system problems. A biopsy, in which a small sample of scalp tissue is taken to be examined microscopically.

## **Treatment Options**

Appropriate treatment options depend upon the type of alopecia. Aggressiveness of the treatment depends on the patient's attitude and must be weighed against potential side effects. In many temporary forms of alopecia, the condition will begin to normalize without treatment. Surgery may be indicated for highly motivated patients with male pattern baldness for which medical therapies are contraindicated or ineffective. Options include hair transplants, scalp reduction, and strip or flap grafts.

#### **Drug Therapies**

A multi-modal approach is required that combines anti-androgens, autoimmune system protective agents, oxygen free-radical inhibitors, and other hair-growth stimulators to halt hair loss and generate hair re-growth.

- Male pattern baldness—minoxidil lotion, 2% to 5% applied twice daily, finasteride, and 1 mg per day orally. Either drug must be used indefinitely to maintain regrown hair. Monitor for side effects.
- Female baldness—minoxidil lotion, 2% applied twice daily. Must be used indefinitely to maintain regrown hair.
- Alopecia areata—the most effective treatments involve steroid drugs, such as cortisone.
- Tinea capitis—antifungal mediations such as griseovulfin, orally for 8 weeks, in combination with antifungal shampoo two to three times per week for 8 weeks. Complete entire course of treatment to prevent relapse.
- Finasteride was once thought to be useless for androgenic alopecia treatment because it primarily affected 5-alpha-reductace, the type 2 DHT-producing enzyme
- Dutasteride Dutasteride (GG745), blocks enzymatic conversion of testosterone to DHT. Unlike finasteride, dutasteride blocks two enzymes that create DHT rather than one and may be a more potent treatment for hair loss.
- Azulfidine Azulfidine is an antiinflammatory sulfa drug used to treat autoimmune disorders (e.g., rheumatoid arthritis and Crohn's disease). It is used in alopecia completely Azulfidine areata. reverses alopecia areata in 23% of participants. Although some reother occurred in growth participants, the majority had no effect.

Surgical and Other Procedures

Surgical options include hair transplants, scalp reduction, and strip or flap grafts.

Complementary and Alternative Therapies

These therapies have limited success in treating male pattern baldness.

#### Nutrition

 Reduce the intake of proinflammatory foods (saturated fats, dairy products, and other animal

- products) and eat more fresh vegetables, whole grains, essential fatty acids, and, in particular, protein (non-animal sources of protein include nuts, legumes, and soy).
- Biotin (300 mcg per day) and trace minerals, such as those found in blue-green algae (2 to 6 tablets per day), help hair growth.
- Androgenetic alopecia: vitamin B6 (50 to 100 mg per day), zinc (30 mg per day), and gamma-linolenic acid (1,000 mg twice a day) help to inhibit 5-alpha reductase.
- Hormone imbalance: essential fatty acids (1,000 mg twice a day), B6 (50 to 100 mg per day), vitamin E (400 IU per day), and magnesium (200 mg twice a day) enhance hormone production.

#### Herbs

- Combine the following in equal parts and use as tea (2 to 3 cups per day) or tincture (20 to 30 drops two to three times per day): ginkgo (Ginkgo biloba), rosemary (Rosemarinus officinalis), prickly ash bark (Xanthoxylum clavaherculis), black cohosh (Cimicifuga racemosa), yarrow (Achillea millefolium), and horsetail (Equisetum arvense)
- Androgenetic alopecia: Green tea (Camelia sinensis), 2 cups per day, and saw palmetto (Serenoa repens), 100 mg twice a day
- Hormone imbalance: Chaste tree (Vitex agnus cactus), 200 to 300 mg per day, has a normalizing effect on the pituitary.
- Viral origin or immune system cause: Herbs that support immune function can help treat the underlying cause of this type of alopecia. Echinacea (Echinacea angustifolia), astragalus (Astragalus membranaceus), and Siberian ginseng (Eleutherococcus senticosus).
- Green Tea Extract Agents from tea (catechins, (-) epigallocatechin-3gallate and (-) epicatechin-3-gallate) affect type I 5-alpha-reductase

- activity responsible for converting testosterone to DHT.
  - Procyanidin B-2 and procyanidin B-3, which directly stimulate epithelial cell growth and check the growth-inhibiting effect caused by TGF-beta2, are of specific interest. Supplementing with 100 to 200 mg proanthocyanidins daily in the form of Grape Seed Extract is suggested for adults.

#### **Physical Medicine**

Stress reduction techniques can increase blood flow to the scalp.

#### Massage

Therapeutic massage increases circulation and reduces stress. Scalp massage using essential oils of rosemary, lavender, sage, thyme, and cedar wood may be helpful in increasing circulation. Add 3 to 6 drops of essential oil to 1 tbsp. of jojoba or grapeseed oil. Massage into scalp daily.

#### **Special Considerations**

A small percentage of men using finasteride may experience a decreased sex drive or difficulty in achieving an erection. If patient is pregnant, postpone treatment until after baby is born.

#### 5.Alzheimer's disease

"Combination therapy is to combat diseases."
-Anonymous.

Alzheimer's disease (AD) is a progressive, degenerative brain disease that results in impaired memory, thinking, and behavior. It is the most common cause of dementia in the elderly They experience gradual memory loss as well as impaired judgment, difficulty in concentration and loss of language skills, personality changes, and a decline in the ability to learn new tasks. Memory loss usually begins at about age 65 and symptoms tend to become severe within 8 to 10 years. In some cases, symptoms may appear earlier in life and advance at a faster or slower rate, but most people who develop symptoms before the age of 60 tend to have more severe forms of the disease. Currently, there is no cure for AD, but the medications, herbs supplements, and lifestyle adjustments may help to slow the progression and improve the symptoms of the disease.

## Signs and Symptoms Psychological Symptoms

- Memory loss, including not recognizing friends and family members
- Difficulty in concentration
- Difficulty in comprehending words, completing sentences, or finding the right words
- Loss of familiarity with surroundings, wandering aimlessly
  - Depression

- Hallucinations, delusions, and psychosis
- Aggression, agitation, anxiety, restlessness
- Accusatory behaviors
- Withdrawal, disinterest, hostility, loss of inhibitions.

## Neuropsychiatry symptoms

- Agitation, 60-70% of patients
- Apathy, 60-70%
- Depression, 50%
- Anxiety, 50%
- Irritability, 50%
- Delusional disorders and psychosis, 40-50%
- Disinhibition, 30%
- Hallucinations, 10%

## **Physical Symptoms**

- Impaired movement or coordination
- Muscle rigidity, shuffling or dragging feet while walking
- Insomnia or disturbances in sleep patterns
- Weight loss
- Incontinence
- Muscle twitching or seizures

#### Causes

The causes of AD are not entirely known but are thought to include genetics and environmental factors. New research indicates that free radicals may play a role in the development of AD. A gene for the

epsilon apolipoprotein (ApoE) protein especially ApoE3 and ApoE4 varieties- is thought to accelerate the formation of abnormal deposits (called plaques) in the brain and increase the risk for AD. The environment may play a part in AD because people in different regions of the world have widely varying risks of developing the disease. People with AD have abnormal deposits, or plaques, in their brain tissue. These plaques contain beta amyloid, a protein that releases free radicals, or highly reactive molecules that can cause damage to cells through a process called oxidation. These free radicals are believed to lower levels of acetylcholine and damage brain tissue, bringing on the symptoms of AD. Other factors that may contribute to the development of AD include infections (such as herpesvirus type 1), exposure to metal ions (such as aluminum, mercury, zinc, copper, and iron), or prolonged exposure to electromagnetic fields.

#### **Risk Factors**

- Family history of AD
- Older age-20% to 40% of people with AD are older than 85
- Female gender-while women tend to develop AD more than men, this may be related to the tendency for women to live longer
- Americans are more likely to get or Native than Asians AD Americans
- Long-term high blood pressure
- History of head trauma-one or more serious blows to the head may put a person at an increased risk
- Down Syndrome
- Elevated levels of homocysteine
- Aluminum or mercury poisoning
- to exposure Prolonged electromagnetic fields

#### Diagnosis

There is no definitive test for AD, and a true diagnosis of AD can only be made after a person dies and an autopsy is performed on the brain. All individuals with AD have an accumulation of abnormal deposits (called plaque) and tangled nerve cells in their brains. Eliminating the possibility of other illnesses makes diagnosis. The following tests may also be used to aid in the diagnosis.

- Psychological tests—assess individual's memory and attention span. They may also reveal difficulties in problem-solving, social, and language skills.
  - Electroencephalograph (EEG)traces brain-wave activity. This test sometimes reveals "slow waves" in people with AD. Although other diseases may reveal similar brainwave activity, EEGs distinguish a person with AD from a severely depressed person, whose brain waves are normal.
  - Imaging tests (such as CT, MRI, or PET)—computerized tomography magnetic (CT) or resonance imaging (MRI) can detect presence of stroke, blood clots, and tumors (problems that cause ADsymptoms but are not like themselves related to AD). MRI, tomography positron emission (PET) scans, and other advanced imaging techniques may eventually diagnose AD able to altered identifying blood flow patterns in the brain.
  - Blood test for Apo E4-although the presence of Apo E4 gene in the blood may suggest AD, it does not always make an accurate diagnosis.

#### Lab Tests

Standard lab tests for Alzheimer's disease includes Complete Blood Count (CBC), Thyroid panel: T3, T4, TSH, Liver function tests, STD testing: VRDL for syphilis, HIV if young, Vitamin B12 and folate levels, A comprehensive hormone panel, including estrogen (E1, E2, and E3), progesterone, testosterone, and melatonin

Adrenal function test, including cortisol and DHEA. Oxidative stress levels, Essential Fatty Acid Panel, Homocysteine, B6, B12, and folate levels, Markers of inflammation, including C-Reactive Protein (CRP), Hair mineral analysis to assess heavy metal toxicity, and comprehensive vitamin panel (including vitamins A, C, E, K, and betacarotene)

#### **Preventive Care**

Consuming a low-fat, low-calorie diet may reduce the risk for AD.

- Higher intake of fatty, cold-water fish (such as tuna, salmon, and mackerel) has been associated with a lower risk of dementia which may be due to the high level of omega-3 fatty acids. Eating fish at least two to three times per week provides a healthy amount of omega-3 fatty acids.
  - Reducing intake of linoleic acid (found in margarine, butter, and dairy products) may prevent cognitive decline.
  - Antioxidants, such as vitamins A, E, and C (found in darkly colored fruits and vegetables) may help prevent damage caused by free radicals.
  - Maintaining normal blood pressure levels may reduce the risk for AD.
    - Hormone-replacement therapy in postmenopausal women may decrease production of chemicals that cause AD, stimulate growth of brain cells, and improve blood flow in the brain. However, the role of hormones in the prevention of AD is still controversial.
  - Some studies suggest that certain medications may prevent AD, including "statin" drugs (such as pravastatin or lovastatin, used to lower cholesterol) and nonsteroidal anti-inflammatories (NSAIDs), with the exception of aspirin.
    - Keeping mentally and socially active may help delay the onset or slow the progression of AD.

**Treatment Approach** 

Unfortunately, there is no cure for AD. The goal in treating AD is to slow the progression of the disease and improve symptoms. The most promising treatments for AD include medications that increase the amount of acetylcholine in the brain (such as donepezil), antioxidants that scavenge free radicals (such as vitamin E and ginkgo biloba), lifestyle modifications (such as walking programs and relaxation training) to reduce anxiety and improve behavior. Studies suggest that music therapy, the use of music to relax patients and bolster the immune system, may be healing for those with AD as well. It is also important that

family members of people with AD get emotional support and assistance with the demanding tasks of caregiving.

#### Lifestyle

- A supervised walking program with a caregiver or other reliable companion may improve communication skills and diminish the risk of wandering.
- Bright light therapy may control insomnia and wandering.
- Calming music may reduce wandering and restlessness, boost brain chemicals, and improve behavior.
- Pet dogs can increase appropriate social behaviors.
- Relaxation training and other exercises that require focused attention (often used with refreshments rewards) as can improve social interaction and the ability to perform tasks.
- The Safe Return Program, implemented by the Alzheimer's Association, requires that a person with AD wear an identification bracelet. If he or she wanders, the caregiver can contact the police and the national Safe Return office, where information about the patient is stored and shared nationwide.

Individuals with AD may also have particular dietary concerns. They may require:

- Extra calories due to increased physical activity and restless wandering.
- Supervised meals and assistance with feeding. People with AD often forget to eat and drink, and, as a result, often become dehydrated.

#### Medications

The following medications increase the amount of acetylcholine, in the nervous system and slow the progression of AD:

- Donepezil—slows progression of AD in 30% to 50% of people with the disease; has few side effects
- Tacrine—10% to 20% of people who develop AD early in life show a positive response to this medication; not beneficial for people in the late stages of the

disease; serious side effects include nausea, vomiting, diarrhea, and addiction

Rivastigmine-side effects include dizziness. headache, nausea. vomiting, and diarrhea.

The following medications may ease the symptoms related to AD:

- Selective serotonin reuptake inhibitors (SSRIs)-increase activity of a brain chemical called serotonin: used to treat depression; because symptoms of depression often precede AD, SSRIs may slow the development of AD
- Methylphenidate-stimulates the brain to increase alertness; used to treat withdrawal and apathy
- olanzapine, or Risperidone, haloperidol-act as mood stabilizers and work on improving social interactions, mood, expression of mood, delusions, and paranoia; decreases aggression; haloperidol has serious side effects, including impaired control of movement
- Carbamazepine (or other antiseizure drugs)-stabilizes sodium levels in the brain; used to treat agitation.
- excellent Estrogen is an neuroprotective agent and functions in a variety of ways, including antioxidant mechanisms, protection against toxicity from beta-amyloid, encouragement of neuronal dentritic growth, increasing.
- Growth Factor (NGF), Nerve axonal neuronal stimulation of modulation and sprouting, apolipoprotein E expression. All of involve the pathways these Alzheimer's development of disease.
- Secretase Inhibitors are an area of future research. These substances decrease levels of beta-amyloid by affecting its cleavage and metabolism.
- Metanicotine is less toxic than nicotine and causes nearly the same acetylcholine release. Metanicotine is currently undergoing clinical studies for use in Alz-heimer's disease.

#### **Nutrition and Dietary Supplements**

Two antioxidants in particular, vitamins E and C, have shown promise in both the prevention and treatment of the disease.

#### Melatonin

Melatonin is an antioxidant that has been shown to be highly effective in reducing oxidative damage to the central nervous system. Melatonin also stimulates several antioxidant enzymes, including glutathione glutathione peroxidase and reductase. Alzheimer's disease patients received 9 mg of melatonin daily for 22 to 35 months. A significant improvement of sleep quality was found.

#### Vitamin E and Vitamin C

Vitamin E dissolves in fat readily enters the brain, and helps slow down the cell damage that occurs naturally with age. cognitive skills healthy improve in individuals, and decrease the symptoms of dementia.

#### S-adenosylmethionine (SAMe)

It is a naturally occurring compound that increases the body's levels of serotonin, melatonin, and dopamine. Clinical studies suggest that people with AD and depression have depleted levels of SAMe in their brain tissue. It has improved cognitive function

#### Beta-carotene and Vitamin A

Studies suggest that levels of vitamin A and beta-carotene, may precursor. with AD significantly lower in people compared to healthy individuals

Vitamin B<sub>9</sub> (Folate) and Vitamin B<sub>12</sub>

Folate is a substance essential for the nervous system and clears homocysteine from the blood. Methylcobalamin, the neurologically active form of vitamin B12, 5-40 mg daily to protect against excitotoxity

#### Acetyl-L-carnitine

In addition to being structurally similar to the brain chemical acetylcholine, acetyl-Lcarnitine is a scavenger of free radicals and is involved in the growth of brain cells. Use of this supplement for AD should be avoideduntil more information is available.

#### Phosphatidylserine (PS)

PS is a naturally occurring substance found in the body that promotes cell health and boosts the activity of acetylcholine and other brain chemicals. Clinical trials have found that it may improve memory, ease symptoms in those with mild to moderate dementia, and prevent cognitive decline in middle-aged individuals.

#### Coenzyme Q10 (CoQ10)

CoQ10 is used in the mitochondrial production of energy in the electron transport chain. A role for mitochondrial dysfunction in neurodegenerative disease is gaining support. Studies have implicated mitochondrial defects in Alzheimer's disease and use of CoQ10 has been suggested for this reason.

#### Red Wine and Grape Juice

Resveratrol, a flavonoid or plant substance found in red wine and grape juice, is an antioxidant that may benefit people with AD.

#### Herbs

#### Ginkgo (Ginkgo biloba)

- Improvements in thinking, learning, and memory
- Improvements in daily living
- Improvements in social behavior
- Delayed onset of symptoms
- Reduced symptoms of depression

Recommended dosages for ginkgo range between 120 to 240 mg per day. Reported side effects have been minor, but ginkgo should not be taken with medications such as warfarin, vitamin E, or a class of antidepressants called monoamine oxidase inhibitors (MAOIs). Preliminary studies indicate that the following herbs may also slow the progression of AD and improve memory and behavior:

- Asian ginseng (Panax ginseng) and American ginseng (Panax quinquefolium)
- Nicotine (Nicotiana tobaccum)
- Huperzine (Huperzia serrata)
- Snowdrop (Galanthus nivalus)
- Physostigmine (Physostigma venenosa)

The following herbs may be recommend the following for people with AD:

- Sage (Salvia officinalis)
- Lemon balm (Melissa officinalis)
  - Rosemary (Rosmarinus officinalis)
  - Peony (Paeonia suffruticosa)
  - Guarana (Paullinia cupana)
  - Gotu kola (Centella asiatica)

#### Curcumin

Curcumin, the active ingredient in the herb turmeric, is being investigated for use in Alzheimer's disease due to its potent antiinflammatory action

#### Acupuncture

Small studies have shown that transcutaneous electrical nerve stimulation (TENS), a technique used in physical therapy and certain types of acupuncture, may improve memory and daily living skills in people with AD.

## Massage and Physical Therapy

The inability to communicate normally with language increases anxiety and frustration in people with AD. Using touch, or massage, as a form of nonverbal communication has been shown to benefit those with AD Massage may be beneficial for people with AD not only because it is relaxing, but also it provides a form of social interaction and a moderate form of exercise.

## Mind/Body Medicine

## **Music Therapy**

Music therapy, the use of music to calm and heal an individual, cannot slow or reverse dementia, but it may improve quality of life for both a person with AD and his or her caregiver. Clinical reports suggest that music therapy may reduce wandering and restlessness and increase chemicals in the brain that enhance sleep and ease anxiety. People with AD have been shown to experience significant increases in levels of melatonin, norepinephrine, and epinephrine after listening to live music regularly for a month. Mood also improved after listening to the music.

#### Support for the Caregiver

Studies suggest that caregivers who receive emotional support tend to experience an improvement in their quality of life, and those they are caring for benefit as well.

#### Ayurveda

- Winter cherry (Withania somnifera)—demonstrates antioxidant and anti-inflammatory properties and enhances the tolerance of stress.
- Brahmi (Herpestis monniera)
   improves motor skills as well as the ability to learn and retain information

# Other Considerations Prognosis and Complications

• Falls (from impaired coordination)

- "Sundowning" (withdrawal or agitation in the evening)
- Malnutrition and dehydration
- Infection (from urinary tract infections or pneumonia)
- Asphyxiation (stopped breathing)
- Harmful or violent behavior toward self or others
- Suicide
  - Poor health and support due to caregiver burnout
  - Physical and emotional abuse, including neglect
- Coronary disease.

# 6.Amenorrhoea

"Universe is our body; our body is universe."

-Sattamuni Gnam.

Amenorrhea is the absence of menstruation. When a girl reaches age 16 and has not begun menstruating, she may have primary amenorrhea. When a woman who has had menstrual cycles misses three periods in a row, she is considered to have secondary amenorrhea. A hormone imbalance can cause hypoestrogenemic amenorrhea.

# Signs and Symptoms

Symptoms sometimes related to primary amenorrhea include headaches, abnormal blood pressure, vision problems, acne, excessive hair growth, and perhaps either a short, stubby physique or extremely tall stature. Symptoms sometimes related to secondary amenorrhea include nausea. swollen breasts, headaches, vision problems, unusual thirst, goiter, skin darkening, extreme weight loss, alcoholism, liver disease, and kidney failure. Hot flashes, mood changes, depression, and vaginal dryness are common with estrogen deficiency.

#### What Causes It?

Generally, the causes of amenorrhea include certain genetic defects, body structure abnormalities, or endocrine disorders. Specific causes include the following.

- Developmental problems, such as the absence of the uterus or vagina
- Hormone imbalance produced by the endocrine system
  - Excessive amounts of the male hormone testosterone
  - Improper functioning of the ovaries
  - Intrauterine infection or endometritis
  - Menopause, usually between the ages of 40 and 55

- Pregnancy or breast-feeding
- Discontinuation of oral contraceptives
- Disease (such as diabetes mellitus or tuberculosis)
- Stress or psychological disorders
- Malnutrition, extreme weight loss, anorexia nervosa
- Extreme overweight (obesity)
- Extreme exercise (such as longdistance running)
- Drug abuse

#### What to be done

Conduct a physical examination, which will include an internal pelvic examination. Laboratory tests may include analysis of mucus from the cervix and uterus, blood tests, computer assisted tomography (CAT) scan, magnetic resonance imaging (MRI), or ultrasound.

# **Treatment Options**

Based on the underlying cause, treatments include hormone therapy, psychological counseling and support, and surgery among others.

#### **Drug Therapies**

The following drugs are prescribed:

- Oral contraceptives or hormones to cause menstruation to start
- Estrogen replacement for low levels
  of estrogen caused by ovarian
  disorders, hysterectomy, or
  menopause; greatly reduces risk of
  cardiovascular disease and inhibits
  osteoporosis; conjugated estrogens
  0.625 to 1.25 mg per day; or on
  days 1 to 25 of calendar month (0.3
  mg per day prevents bone loss).
  Women with an intact uterus should

receive progestin (medroxyprogesterone acetate (MPA), a progestin, given 5 to 10 mg per day on days 16 to 25 of calendar month to reduce risk of estrogen-induced endometrial cancer

- Progesterone to treat ovarian cysts and some intrauterine disorders
- Alternative estrogen replacement includes ethinyl estradiol (20 or 50 mcg); estradiol (0.5, 1, 2 mg); Selective Estrogen Receptor Modulators (SERMs) such as naloxifene if individual refuses estrogen but is at-risk for osteoporosis

# Complementary and Alternative Therapies Nutrition

Eat fewer refined foods and limit animal products. Limit the cruciferous family of vegetables (cabbage, broccoli, brussel sprouts, cauliflower, kale). Eliminate methylxanthines (coffee, chocolate). Eat more whole grains, organic vegetables, and omega-3 fats (cold-water fish, nuts, and seeds). In addition, patient may take the following supplements.

- Calcium (1,000 mg per day), magnesium (600 mg per day), vitamin D (200 to 400 IU per day), vitamin K (1 mg per day), and boron (1 to 3 mg per day).
- Iodine (up to 600 mcg per day), tyrosine (200 mg one to two times per day), zinc (30 mg per day), vitamin E (800 IU per day), vitamin A (10,000 to 15,000 IU per day), vitamin C (250 to 500 mg two times per day), and selenium (200 mcg per day).
- B6 (200 mg per day) may reduce high prolactin levels.
- Essential fatty acids: Flaxseed, evening primrose, or borage oil (1,000 to 1,500 mg one to two times per day).

#### Herbs

Chaste tree (Vitex agnus-cactus)
helps normalize pituitary function
but must be taken for 12 to 18
months and used under supervision.

- Black cohosh (Cimicifuga racemosa), licorice (Glycyrrhiza glabra), and squaw vine (Mitchella repens) help to balance estrogen levels not to take licorice if there is high blood pressure.
  - Chaste tree, wild yam (Dioscorea villosa), and lady's mantle (Alchemilla vulgaris) help balance progesterone levels.
  - Kelp (Laminaria hyperborea), bladderwrack (Fucus vesiculosus), oatstraw (Avena sativa), and horsetail (Equisetum arvense) are rich in minerals that support the thyroid.
  - Milk thistle (Silybum marianum), dandelion root (Taraxacum officinale), and vervain (Verbena officinalis) support the liver.

# Homeopathy

Homeopathy may be useful as a supportive therapy.

# **Physical Medicine**

The following help increase circulation and relieve pelvic congestion.

- Castor oil pack. Apply oil to skin of abdomen, cover with a clean soft cloth and plastic wrap. Place a hot water bottle or heating pad over the pack and let sit for 30 to 60 minutes. Use for three days.
- Contrast sitz baths. Use two basins
  that you can comfortably sit in. Sit
  in hot water for three minutes, then
  in cold water for one minute.
  Repeat this three times to complete
  one "set." Do one to two sets per
  day, three to four days per week.

#### Acupuncture

Acupuncture is believed to improve hormonal imbalances that can be associated with amenorrhea, and related conditions such as polycystic ovary syndrome (PCOS). Acupuncture may promote ovulation. Amenorrhea is generally associated with liver and kidney deficiencies and treatment often focuses on strengthening function in these areas.

#### Massage

Therapeutic massage may improve endocrine function by relieving stress.

# **Special Considerations**

Becoming pregnant may be difficult or impossible. Amenorrhea also may cause pregnancy complications.

# 7. Amyloidosis

"The root cause of diseases could be peak and valley effect of tridhosas."

-Thiruvalluvar.

Amyloidosis is a group of diseases in which amyloid- a protein like substance-builds up in the organs and tissues. The buildup may happen systemically (throughout the body) or locally (in one tissue).

There are four major types of systemic amyloidosis:

- Primary amyloidosis (the most common form), typically caused by a buildup of fragments of antibody proteins
  - Hereditary amyloidosis, a genetic form passed down in families
  - Reactive or secondary amyloidosis, which develops along with a chronic inflammatory disease, such as rheumatoid arthritis
  - Beta<sub>2</sub>-microglobulin amyloidosis beta<sub>2</sub>-microglobulin is a protein that can build up in the blood as a result of kidney failure. This type of amyloidosis occurs in people who have been on dialysis for a long time.

Localized amyloidosis affects more than 90% of people with Type II diabetes mellitus, people with certain cancers of the thyroid or other tumors of the endocrine system, and about 80% of people over age 80. It also affects people with conditions such as Alzheimer's disease, Down's syndrome, hereditary cerebral hemorrhage, and the disease commonly known as "mad cow disease.

# Signs and Symptoms

- Heart disease and irregular heart beat
- Kidney disorders, including kidney failure

- Gastrointestinal (GI) disorders, such as perforation, bleeding, slow movement of matter through the GI tract, and blockage
- Enlarged liver
- Diminished function of the spleen
- Diminished function of the adrenal and other endocrine glands
- Problems in transmitting nerve signals, which could lead to impotence, gastrointestinal problems, and orthostatic hypotension
- Carpal tunnel syndrome
- Skin conditions, such as growths, color changes, purpura around the eyes, and easy bruising
- Enlarged tongue, sometimes with swelling under the jaw, breathing difficulties, and sleep apnea
- Lung problems
- Swelling of the shoulder joints
- Susceptibility to bleeding problems Signs and symptoms of hereditary amyloidosis may include the following:
  - Nervous system disorders
  - Gastrointestinal conditions, such as diarrhea and weight loss
  - Heart problems
  - Kidney disease, though this is less common than in primary amyloidosis

Signs and symptoms of secondary amyloidosis may include the following:

- Kidney disease, which may lead to kidney failure; this is the cause of death in 40 to 60% of cases
- Enlarged liver
- Enlarged spleen

 Heart problems—this is rare, and less severe than in other forms of amyloidosis

Most people who are diagnosed with secondary amyloidosis have had their related inflammatory disease for a decade or more. Beta<sub>2</sub>-microglobulin amyloidosis usually occurs in people who have end-stage renal (kidney) disease and need long-term dialysis, but it also can occur in people who use ambulatory dialysis. Deposits are often found in bones and joints. Such deposits may cause carpal tunnel syndrome, joint pain and stiffness, soft tissue masses, bone cysts, and fractures.

#### What Causes It?

The body naturally makes amyloid as it ages and deposits the amyloid in the space surrounding cells. Some people the accumulate abnormal amounts of amyloid, causing amyloidosis. Many factors can play a part in this; the process depends on the form of the disease. Hereditary amyloidosis results from genetic changes that cause the body to make abnormal proteins. Age seems to play a role in amyloidosis-the disease may be triggered by damage accumulates in the body over time. This kind of damage may come from the body's use of oxygen (oxidation) and from free radicals. Amyloid is also more likely to form in people who have immune system problems. Once amyloid deposits have started, they seem to continue building up in the same locations.

# Who's Most At Risk?

People with the following profile are at increased risk for developing amyloidosis:

- Men
- Being more than 50 years old. Cases do occur in younger adults and children, usually in those with an inflammatory condition such as juvenile rheumatoid arthritis. However, most cases are diagnosed in older people.
- Disease affecting the antibodyproducing plasma cells in the blood (such as multiple myeloma, malignant lymphoma, benign monoclonal gammopathy, or Waldenström's macroglobulinemia)
- Chronic inflammatory disease (such as rheumatoid arthritis,

- inflammatory bowel disease, familial Mediterranean fever, or ankylosing spondylitis) may cause secondary amyloidosis
- Long-term dialysis—almost all patients with end-stage renal disease who are on hemodialysis for more than 5 years develop amyloid deposits
- Inherited genetic changes that affect proteins in the body
- Long-term infection such as leprosy, tuberculosis, or osteomyelitis; this may bring on secondary amyloidosis

#### What to be done

Tests of blood, urine, bone marrow, or biopsies (samples of tissue) from abdominal fat, the rectum, or an affected organ may show signs of amyloid deposits. With hereditary amyloidosis, DNA tests may reveal the genetic change that caused the condition. Specialized X-ray studies of tissue samples may show the structure of amyloid deposits. Depending on the signs and symptoms, other tests are done to find out more about the condition, such as which organs are affected and whether condition is getting worse.

# Treatment Options Prevention

Those who have hereditary amyloidosis in their family should consider going to genetic counseling to learn about the risks of passing the condition to their children.

# **Treatment Plan**

In most people, treatment can help support health and reduce the impact of amyloidosis, but cannot cure the disease. Treatment involves decreasing the proteins that can make up amyloid. Chemotherapy is used for primary amyloidosis. There is no treatment per se for secondary amyloidosis; the underlying condition must be treated. A liver transplant may be necessary for hereditary amyloidosis. A kidney transplant may cure amyloidosis related to dialysis.

# **Drug Therapies**

Under select circumstances, certain drug combinations, many of which are under investigation, have been used to treat primary amyloidosis. For amyloidosis related to kidney failure, researchers are studying other treatments, such as using

new dialysis systems and adding antioxidants to the dialysis fluid; antioxidants may help rid the body of unstable compounds known as free radicals. To help relieve symptoms:

- Diuretics to relieve swelling caused by fluid retention
- Anti-arrhythmics to control heart rhythm
- Metoclopramide to help empty food from the stomach
- Antibiotics to control bacteria that may cause diarrhea or prevent the body from absorbing nutrients

# Surgical and Other Procedures

- Dialysis for those whose kidneys are failing
- Kidney, liver, heart, or bone marrow transplant
- Spleen removal
- Carpal tunnel surgery
- Hip replacement
- Pacemaker implantation to control heart rhythm

# Complementary and Alternative Therapies Nutrition

- Limit the amount of meat consumed;
- Take fish oil supplements, which are high in omega-3 fatty acids helps to reduce inflammation in chronic inflammatory conditions such as rheumatoid arthritis and appears to help prevent amyloidosis in mice.
- Vitamin C.

# Additional nutritional information includes:

- Bromelain, an enzyme derived from pineapple, may help break down amyloid deposits in kidney tissue;
- Glutathione low levels may be associated with higher levels of beta<sub>2</sub>-microglobulin in people on dialysis with or without

- amyloidosis- 500 mg two or three times a day to people on dialysis to prevent the disease.
- Avoid processed foods, caffeine, food additives, dairy products, and refined sugars.
- Eat more whole grains, fresh fruits and vegetables, nuts, seeds, and cold-water fish.

#### Herbs

Flavonoids are plant compounds that fight damage from oxidation and free radicals, as well as inflammation.

- Pycnogenol, which comes from the bark of French maritime pine (*Pinus* maritima), is rich in flavonoids.
  - Gingko biloba extract (GBE) also contains flavonoids because it is an antioxidant.

# **Prognosis/Possible Complications**

Most people with primary amyloidosis die within two years of diagnosis, usually of heart failure, uremia (toxic buildup of wastes in the blood), or other complications. With secondary amyloidosis, most people survive 5 to 10 years after their condition surfaces. Some people survive as long as 15 years after the disease develops. Kidney stop beta2-microglobulin transplants amyloidosis. People with amyloidosis affecting the heart are extremely sensitive to certain medicines. Digoxin may cause fatal heartbeat. Calcium-channel irregular blockers may worsen congestive heart failure. Diuretics and vasodilators may cause life-threatening low blood pressure.

#### Follow Up

After diagnosis, tests may be performed on a regular basis to check levels of proteinrelated substances, the size and placement of amyloid deposits, the development of the disease, and the effects of treatment.

# 8.Anaphylaxis

"Fasting should be a prime medicament."
-Siddhars.

Anaphylaxis is a sudden, potentially life-threatening allergic reaction. The

symptoms may begin mildly but quickly become severe, often in a matter of seconds to minutes; occasionally, though, the symptoms develop gradually over a 24-hour period. The more rapidly the symptoms begin, the more severe they generally are. Anaphylaxis may occur again the next time a person is exposed to an allergen. The first exposure to a trigger generally lays the groundwork for anaphylaxis by creating hypersensitivity. Anaphylaxis should always be considered a medical emergency.

## Signs and Symptoms

- Itching (often the first symptom), redness, hives, swelling, sweating
- Swelling in the nose or throat, hoarseness, wheezing, difficulty speaking, trouble breathing, chest tightness
- Abnormal heart rate or rhythm, shock, heart attack
- Stomach cramps, nausea, vomiting, diarrhea
- Loss of bladder or bowel control, an urgent feeling of needing to go to the bathroom
- Tingling, headache, lightheadedness, feeling disoriented or feeling a sense of doom, fainting, seizures

#### What Causes It?

Anaphylaxis occurs when the immune system overreacts to an allergen that you have encountered at least once before. Occasionally, through a different mechanism, an anaphylactic-like reaction (called anaphylactoid reaction) occurs with the very first exposure to the allergen. Symptoms are the same for anaphylaxis and anaphylactoid reactions. Symptoms develop when cells release substances that are meant to protect you against the allergen. Examples anaphylaxis triggers include:

- Antibiotics
- Aspirin, nonsteroidal antiinflammatory drugs (NSAIDs, such as ibuprofen), and prescription opiate pain medications (such as codeine); people with asthma and nasal polyps tend to be at greater risk for an anaphylactoid reaction to these drugs
- Foods, such as nuts, shellfish, egg whites, and berries; those who react

- to ragweed may also react to chamomile tea
- Insect bites or stings
- Egg-based vaccines
- Ingredients in some allergy skin tests, allergy shots, and vaccines
- Blood transfusions
- Latex (as in condoms, rubber gloves)
- Food coloring and preservatives
- Although rare, athletes may have an anaphylactoid reaction to exercise after eating certain foods, such as celery, shrimp, apples, squid, wheat, hazelnut, or chicken; this reaction is thought to be related to endorphins

### Who's Most At Risk?

The following factors may increase risk for anaphylaxis:

- Known allergies
- Asthma
- Initial exposure to the allergen by injection (intravenous medication)
- Frequent exposure to the allergen, particularly if frequent exposure is followed by a long delay and then a reexposure
- Taking beta-blockers, angiotensinconverting enzyme (ACE) inhibitors, or angiotensin II receptor blockers (ARBs)—medications used to treat heart disease or high blood pressure

# What to be done

Perform an exam, ask about any contact patient may have had with possible allergens, and conduct blood or urine tests, a chest X ray, allergy tests, or other tests.

# **Treatment Options Prevention**

- To help prevent anaphylaxis: Avoid anything known or suspected to have triggered a previous allergic response.
- Testing and treatment if any allergies are known or suspected.
- Take medicines by mouth instead of by injection whenever possible.
- Carry a syringe loaded with epinephrine to inject immediately after exposure to a known allergen or at the first sign of a reaction. Also, wear a Medic Alert bracelet to

alert others about the history of this condition.

# Treatment Plan

Get emergency medical care right away to maintain breathing, blood pressure, and heart function and to reverse the reaction.

# **Drug Therapies**

Epinephrine is the drug of choice and should be given right away. Once at the hospital, additional drugs, including antihistamines and corticosteroids, may be used to control symptoms and prevent delayed relapse.

# Surgical and Other Procedures

For breathing trouble, physicians may need to open the airway with an endotracheal tube and possibly connect a ventilator. Other procedures may be necessary as well to stabilize blood pressure.

# Complementary and Alternative Therapies

Anaphylaxis always requires standard emergency medical care. For the most part CAM therapies are inappropriate for treating an anaphylactic reaction. Some nutraceuticals and botanicals can cause allergic reactions, including anaphylaxis.

#### Nutrition

# **Omega-3 Essential Fatty Acids**

Omega-3 essential fatty acids have antiinflammatory properties that may protect against the extreme reaction of anaphylaxis.

#### Quercetin & Other Flavonoids

People with known allergies may take quercetin before being exposed to allergens. To lessen the severity of the allergic response.

#### Vitamin C

Vitamin C is thought to enhance the activity of quercetin.

#### Zinc

Zinc may protect against gastrointestinal symptoms that sometimes accompany anaphylaxis.

#### Herbs

- Sweet chestnut tree (Castanea crenata)— Quercetin is the active component.
- Spreading sneezeweed (Centipeda minima)— appears to inhibit the release of histamine and contains flavonoids.
- Danshen root (Salviae miltiorrhiza)— inhibited skin related allergic reactions.

- Asian rose spp. (Rosa davurica) traditionally used to regulate immune response;
- Hardy orange (Poncirus trifoliata)—used traditionally for treatment of allergies.
- Skullcap root (Scutellaria baicalensis)—may have anti-allergy activity.
- Licorice root (Glycyrrhiza glabra or G. uralensis)—may have antiallergy activity.
- Reishi mushroom (Ganoderma lucidum)—may have anti-allergy activity.

Alert: There are certain herbs for which there have been rare reports of allergic reactions, including:

- Arnica flower (Arnica montana)
- Artichoke leaf (Cynara scolymus)—
   in those with an allergy to
   artichokes
- Blessed thistle herb (Cnicus benedictus)
- Cayenne pepper (Capsicum spp.)
- Cinnamon bark (Cinnamomum verum)
- Dandelion root or herb (*Taraxacum officinale*)—may trigger a reaction in those with latex allergy
- Echinacea (Echinacea purpurea)
- Fennel oil and fennel seed (Foeniculum vulgare)
- Ginkgo biloba leaf extract
- Poplar bud (Populus spp.)—May trigger a reaction in those with salicylate sensitivity
- Psyllium seed (*Plantago* spp.)—
   Allergic response more common with powder or liquid form
- Yarrow (Achillea millefolium)

#### Homeopathy

- Aconitum helps alleviate the tremendous anxiety and fear of dying that may occur during or immediately following an anaphylactic reaction
- Arnica Montana may be used in the case of shock or following a traumatic experience
- Apis Mellifica for puffy, rapidly swelling skin following an insect bite or sting.

# Acupuncture

While conventional treatment of anaphylaxis should never be delayed, acupuncture may prove to be a useful adjunct.

# **Prognosis/Possible Complications**

Without proper treatment, anaphylaxis can be deadly. Most people who receive proper treatment do well, however. Drugs classified as beta-blockers, monoamine oxidase inhibitors, ACE inhibitors, and ARBs may worsen anaphylaxis or interfere with treatment; if there is a history of anaphylaxis

### Follow Up

Symptoms that started early may continue or new symptoms may set in later. Therefore, hospitalization may be needed for at least 24 hours. For a severe reaction, providers may monitor heart function or admit patients to the intensive care unit.

## 9.Anemia

"Prevention is better than cure."

-Anonymous.

Anemia is characterized by a deficiency in red blood cells or in the concentration of hemoglobin containing portions of red blood cells). These deficiencies are caused by either decreased production or increased destruction of red blood cells. Anemia is most common among women in their reproductive years (5.8 percent), infants (5.7. percent), and the elderly (12 percent). Because one of the major functions of red blood cells is to transport oxygen, a decrease in red blood cells decreases the amount of oxygen delivered to the body's tissues, which results in the symptoms of anemia.

# Signs and Symptoms

- Tiredness
- Shortness of breath
- Paleness
- Lightheadedness
- Headache
- Heart palpitations and chest pain

#### What Causes It?

- Pregnancy and breast-feeding
- Iron, folic acid, vitamin B12, or other vitamin deficiencies
- Certain chronic conditions
- Gastrointestinal blood loss (caused by ulcers, cancer, parasites)
- Genitourinary blood loss (such as from heavy menstruation)
- Excessive blood loss (after surgery or regular blood donations)
- Excessive alcohol or drug use
  - Malabsorption syndromes (for example, celiac disease)

- Congenital diseases (for example, sickle-cell anemia)
- Malnutrition

#### What is to be done

Anemia is often the result of an underlying disease. Laboratory tests to determine the cause are ordered to begin treatment.

# **Treatment Options**

Treatment depends on the cause and severity of the anemia. A diet that contains all of the nutrients for healthy blood formation such as vitamin B12, iron, and folic acid are given and the underlying disease must first be successfully treated.

# **Drug Therapies**

- Erythropoietin plus iron-for anemia caused by chronic kidney failure
- Corticosteroid medications (such as prednisone)
- Immunosuppressant medications (such as azathioprine)
- Pain relievers (analgesics)-for sickle-cell anemia

# Surgical and Other Procedures

- Removal of the spleen (splenectomy)-may be necessary in cases of hereditary spherocytosis
- Transfusions-may help treat certain types of anemia, such as sickle-cell anemia

# Complementary and Alternative Therapies

Most cases of anemia will respond well to nutritional therapy. Excess iron is toxic and Herbal and nutritional treatments may be helpful when used along with medical treatment.

#### Nutrition

- Ferrous fumerate, glycerate, or glycinate (100 mg per day for three to six months) are the most absorbable forms of iron. Ferrous sulfate (325 mg per day) is poorly and more frequently absorbed causes problems gastrointestinal upset and constipation. Dietary sources of iron include meat, beans, green leafy vegetables, beet greens, blackstrap molasses, almonds, and brewer's
- Vitamin C-250 to 500 mg twice a day to aid in absorption of iron.
- Vitamin B12—cyanocobalamine, 1,000 IU via injection twice a day for one week, then weekly for a month, then every two to three months. Dietary sources include organ meats, meats, eggs, fish, and cheese.
- Folic acid (1 to 2 mg per day)—for folic acid deficiency. Good food sources include green leafy vegetables and grains.
- Omega-3 and omega-6 essential fatty acids (1,000 to 1,500 IU) have decrease been shown to frequency of sickle-cell crisis. EFAs can increase clotting times, so if on anticoagulants, it has to be checked.

#### Herbs

Herbs are generally a safe way to strengthen and tone the body's systems.

Blackstrap molasses, also known as pregnancy tea (1 tbsp. per day in a cup of hot water), is a good source

- of iron, B vitamins, minerals, and is also a very gentle laxative.
- Spirulina, or blue-green algae, has been used successfully to treat both microcytic and macrocytic anemias. Dose is 1 heaping tsp. per day.
- Alfalfa (Medicago dandelion (Taraxacum officinale) root or leaf, burdock (Arctium lappa), and yellowdock (Rumex crispus)

For mild cases of anemia, a single herb, or a combination of these four herbs, may be used.

# Homeopathy

- Ferrum phosphoricum for iron deficiency
- Calcarea phosphorica particularly for children

# Follow Up

Maintaining a normal balanced diet is very important if the cause of anemia is nutritional. Also, avoid drugs that can have adverse effects on your gastrointestinal system and avoid excessive alcohol intake if one or both of these are the cause of anemia.

# Special Considerations

Some neurological changes caused by anemia are irreversible. Pregnant women need three or four times as much iron as normal. A folic acid deficiency during pregnancy can result in infants being born with neural-tube defects, such as spina bifida.

# 10.Angina

"Hyms and prayers are not necessary for wealthy mind." -Thirumoolar.

Angina is chest pain caused by decreased the blood flow to (ischemia). Angina is more likely to happen when blood and oxygen requirements of the heart increase and when the coronary of arteries Examples constrict situations include exercise and stress. Stable angina is when chest pain is at a predictable time or predictable level of exertion - for example, walking 4 blocks or walking up 2 flights of stairs. Stable angina is relieved after a short period of time with rest or nitroglycerin. If angina occurs at rest, the pain doesn't go away after a few minutes with rest or nitroglycerin, or it begins at a lower level of activity than usual, it is considered unstable angina. such circumstances, getting emergent care and getting to the hospital as soon as possible for unstable angina may prevent a heart attack.

# Signs and Symptoms

The classic chest pain from angina feels like significant pressure, squeezing, or tightness in the center of your chest, possibly radiating to the arm and shoulder, neck, and jaw. Other possible feelings include indigestion, rapid or skipping heartbeat, or mild discomfort. If case of diabetes, patient may not feel anything at all when blood flow to heart is diminished.

#### Causes

Coronary heart disease is almost always the cause of angina. Other potential causes or contributing factors include:

- Congestive heart failure
- Anemia when severe enough, anemia can lead to angina because not enough oxygen is getting to the heart, even if blood flow is normal.

#### **Risk Factors**

- · Older age
- Male sex
- Menopause
- Family history of heart disease
- Diabetes
- Tobacco use or exposure to second hand smoke
- High cholesterol
- High blood pressure
- Obesity
- Sedentary lifestyle
- Stress

#### Diagnosis

Have an electrocardiogram (ECG) and a stress test may be suggested the stress test may be done with imaging (like thallium, sestimibi, or an echocardiogram) to look at the blood flow and muscle function of heart. Coronary arteriography may be done and any blockages coronary blood vessels will be detected. Newer non-invasive ways include cardiovascular magnetic resonance imaging (MRI), electron beam angiography, and cardiac CT scans.

#### **Preventive Care**

While participating in an activity that generally triggers angina, take nitroglycerin a few minutes in advance to prevent the pain. The best prevention for angina is to modify as many risk factors for heart disease as possible:

- Stop smoking
- Lose weight if you are overweight
- Control blood pressure, diabetes, and cholesterol
- Eat a diet low in saturated and hydrogenated fats and cholesterol, and high in starches, fiber, fruits, and vegetables
- Exercise 3 hours per week or more (such as 30 minutes per day, 6 days per week)
- Reduce stress

# **Treatment Approach**

The main goal in treating angina is to treat the underlying heart disease and prevent it from getting worse. Lifestyle practices and certain medications can improve blood flow.

# Lifestyle

Changing the diet, exercising regularly, and practicing relaxation techniques to reduce stress can help improve blood flow to heart and reduce angina. These steps can also help treat risk factors for heart disease, like high blood pressure, high cholesterol, and high homocysteine levels.

#### Diet

- Eat a variety of fruits and vegetables (5 to 9 servings/day).
- Eat a variety of grain products, with an emphasis on whole grains (6 or more servings/day).
- Eat at least 2 servings of fish per week
- Limit total fat intake to <30% and saturated fat to <7% of energy. Replace dietary saturated fats and trans fatty with acids and monounsaturated (including polyunsaturated fats foods rich in omega-3 fatty acids). Food sources of omega-3 fatty acids include fatty fish (such as salmon), flaxseed and flaxseed oil, soybean oil, canola oil, and nuts.
- Limit amounts of dairy products to 2 to 4 servings of low-fat or fat free items per day.
- Limit sodium intake to 6 grams per day.
- Limit alcohol intake to 2 drinks per day for men and 1 drink per day for women.
- Maintain a healthy body weight.

# Relaxation

Relaxation techniques help alleviate feelings of stress, which is often a contributing factor to heart disease, and relieve chest pain. Such practices might include the use of meditation, progressive muscle relaxation, breathing exercises, yoga, self-hypnosis, or biofeedback to reduce risk factors for heart disease and to stick with healthy lifestyle changes like quitting smoking and losing weight.

### Medications

Recommend daily aspirin as well as a combination of the following prescription medications:

- Nitroglycerin and oral nitrates— Tolerance occurs with continued use and nitrates can cause significant headaches.
- Beta-blockers—reduce blood pressure, heart rate, and the work of the heart, which reduces the demand and need for blood flow. Common side effects from beta-blockers include sexual dysfunction and feelings of depression. DO NOT stop any medication from this class abruptly; serious side effects can occur and it is slowly weaned off.
- Calcium-channel blockers—reduce blood pressure and the force by which the heart pumps blood; some also reduce heart rate
- Cholesterol-lowering medications

Surgery and Other Procedures

If unstable angina develops, it needs bypass surgery, angioplasty with stent placement, or another type of procedure to improve blood flow to the compromised area of heart. Some newer procedures such as arteriogenesis, and laser procedures can be done to those who are not eligible for angioplasty or bypass surgery. Angiogenesis and arteriogenesis involve administration of proteins that stimulate the growth of new blood vessels. Another approach is the use of gene therapy, which causes body to produce these proteins on a more long-term basis. The idea is that new blood vessels bring greater blood flow and decreased pain if there is chronic stable angina that has not medications using all approaches to lifestyle change available, particularly if a reperfusion procedure like angioplasty or bypass. Cannot be done.

### **Dietary Supplements**

Folic acid may be particularly helpful for reducing symptoms of angina. Also, bromelain, which has anti-inflammatory properties and antithrombotic properties, may prove to have a useful role in treating angina and preventing heart attacks.

#### Herbs

Herbs, however, contain active substances that can trigger side effects and interact with other herbs, supplements, or medications. For these reasons, herbs should be taken with care and ONLY under the supervision there are several different herbs that may be helpful for the treatment and prevention of heart disease, including those that reduce cholesterol, blood pressure, and other risk factors.

Hawthorn (*Crataegus monogyna*) may be especially helpful in alleviating angina.

And may help control high cholesterol and high blood pressure.

### Homeopathy

Homeopathy should NEVER be used instead of immediate medical attention for unstable angina, new onset chest pain, or chest pain that has changed in intensity, frequency, or other characteristics. It may reduce risk factors for heart disease and its consequences.

## Acupuncture

Acupuncture may be useful for reducing risk factors for heart disease. It is considered an excellent treatment for people who wish to quit smoking. Acupuncture may also help relieve angina pain and lead to a faster recovery from bypass surgery.

# Massage and Physical Therapy

Lowering stress hormone levels can lower cholesterol and blood pressure and may, therefore, prove to be beneficial for reducing risk of heart disease. In addition, the relaxing effects of regular massage may help comply with habits necessary to reduce the risk of heart disease, such as dieting, quitting smoking, and exercising.

. Prognosis and Complications

Stable angina can progress and become unstable and even lead to a heart attack. However, with proper treatment using proper diet, exercise, other aspects of lifestyle change, and medication, blood flow to the heart and, therefore angina, can dramatically improve.

# 11.Angioedema; Allergic Reaction

"Banchabootas are the part and parcel of both universe and body"
-Siddhars.

Angioedema refers to swelling that occurs in the tissue just below the surface of the skin. It generally results from an allergic reaction to either a food or medication; it may be a sign, though, of an underlying condition such as leukemia or Hodgkin's disease. There are two basic types of angioedema:

- Hereditary angioedema (HAE), which is genetic and tends to recur
- Acquired angioedema (AAE)

The onset of angioedema varies widely, taking anywhere from minutes to hours to develop. Interestingly, angioedema may affect an area on one side of the body but not on the other.

# Signs and Symptoms

- Burning, painful, swollen areas; usually not itchy; often affects eyelids, lips, tongue, throat, palms, soles, or genitalia
- Hoarseness, tight or swollen throat, breathing trouble
- Discolored patches or rash on the hands, feet, face, or genitals
- Vomiting, abdominal pain, diarrhea, and reduced appetite
- Swelling in or around the eyes
- In a form called angioedemaeosinophilia syndrome, hives, itching, fever, muscle pain, decreased urine, weight gain, and high white blood cell count occur

# What Causes It?

An angioedema reaction may be caused by allergies to foods, dyes, or pollen, or in reaction to certain medications, including nonsteroidal anti-inflammatory drugs (NSAIDs. such as ibuprofen) and angiotensin-converting enzyme (ACE) inhibitors (such as captopril, lisinopril, enalapril). Conditions such as leukemia, Hodgkin's disease, and connective tissue disorders (such as systemic lupus erythematosus) may also trigger angioedema.

#### Who's Most At Risk?

- Experiencing injury, sudden temperature change, stress, or anxiety
- Exercising intensely
- Undergoing a dental procedure
- Going through puberty or menstruating
- Having had a body-wide allergic reaction in the past
- Having ovarian cysts
- Taking ACE inhibitors (such as captopril, lisinopril, enalapril)

# What is to be done

Perform a physical exam and ask about symptoms. Blood and urine tests may help pinpoint the cause of the angioedema.

# **Treatment Options**

# Prevention

Eliminate any known or suspected triggers. Allergy testing with a trained specialist may help identify inciting agents. Advise to wear a Medic Alert bracelet that notes this condition.

#### Treatment Plan

The airway is kept open and that breathing is not impaired. The next steps include identifying and removing the trigger as well as relieving other symptoms.

# **Drug Therapies**

Drugs include epinephrine, antihistamines, and corticosteroids. Children respond better to treatment with these medications than adults do. Acute attacks tend to clear up within four days with or without medication.

# Complementary and Alternative Therapies

In a severe attack, standard emergency medical care is given to keep open the airways and stabilize the condition. New substances, including herbs or supplements, should not be introduced during an acute attack. In addition, herbs and supplements may help alleviate mild symptoms, particularly for chronic and recurring forms. Homeopathic remedies may help alleviate mild symptoms and reduce the frequency and severity of episodes.

# Nutrition

Certain foods and food additives may trigger angioedema in people who are susceptible. You should eliminate any foods or food additives that trigger symptoms. Such as

- Seafood
- Nuts
- Legumes
- Eggs
- Chocolate
- Milk
- Berries

Certain individuals may have a reaction in response to:

- Citrus fruits
- Sulfites—used as an antioxidant or freshening agent (preservative) in many foods and beverages
- Yellow dye (also called tartrazine)—those who react to aspirin or other NSAIDs are more susceptible to having an allergy to yellow dye
- Help identify food triggers by collecting detailed information about diet
  - Performing skin tests for sensitivity to certain substances
  - Cautiously testing suspected triggers
- Monitoring symptoms as foods are eliminated from diet then slowly reintroduced one at a time

If gastrointestinal symptoms (abdominal pain, vomiting, diarrhea, or reduced appetite), this may be an indication that antigens (food triggers) may get absorbed more easily than others through the stomach and intestines; in that case, a diet that eliminates common dietary antigens (as listed above) can benefit.

• Quercetin (a naturally occurring flavonoid) may reduce the likelihood of an allergic reaction. The recommended amount is generally 200 to 400 mg three times a day before meals. If patient is sensitive to citrus or taking calciumchannel blockers for high blood pressure, avoid citrus-based forms of flavonoids.

Bromelain (Ananas comosus, an enzyme derived from pineapple)—
used by some clinicians to help reduce inflammation; some recommend its use with turmeric (Curcuma longa), which may enhance the effects of bromelain.

#### Herbs

- Devil's claw root (Harpagophytum procumbens)—may be recommended by an herbal specialist to reduce inflammation and skin lesions
- Ginkgo biloba extract—used as an anti-allergenic agent and antiinflammatory
- Goldenseal (Hydrastis canadensis)—has been used for gastrointestinal symptoms such as stomach pain, diarrhea, and reduced appetite that may accompany a severe allergic reaction
- Licorice root (Glycyrrhiza glabra)—has been used traditionally to diminish inflammation in the case of an allergic reaction and may also normalize immune function

#### Homeopathy

 Apis is traditionally used for hives and angioedema and may be useful to prevent or treat chronic, recurrent cases.

# Acupuncture

Acupuncture may help immune balance and lessen the frequency or severity of allergic responses.

# **Prognosis/Possible Complications**

If angioedma affects the throat, the airway passage could be blocked, thereby creating a life-threatening situation. It is also possible that the angioedema may develop into anaphylaxis, which will require emergency medical care to maintain breathing, blood pressure, and heart function and to reverse the reaction.

#### Follow Up

After an attack, it's important to identify and avoid any triggers and to treat any underlying condition.

# 12.Anorexia nervosa; Anorexia

"Lack of confidence leads to despair"

-Anonymous.

People who intentionally starve themselves into an emaciated state yet remain convinced that they are overweight are suffering from a condition known as anorexia nervosa. Anorexia rarely begins in people who are older than 40 years of age. It most commonly appears in the teenage years. The onset of anorexia is often preceded by a traumatic or stressful event and it is usually accompanied by other emotional difficulties. Anorexia is a lifethreatening condition that can result in death from starvation, heart failure, electrolyte imbalance, or suicide.

There are two main types of anorexia nervosa:

- Restricting Type—characterized by dieting, fasting, and/or excessive exercise
- Binge-Eating/Purging Type (anorexic-bulimic)—characterized by self-induced vomiting and/or misuse of laxatives, enemas, and/or diuretics. This type carries greater medical risk.

# Signs and Symptoms

The primary sign of anorexia nervosa is severe weight loss, accompanied by any number of physical and psychological symptoms and unusual behaviors related to food, eating, or exercise. A person for whom a healthy weight would be 125 pounds, for example, may drop 20, or even as much as 60 pounds below this. At the same time, the person may insist that he or she is overweight.

# **Physical Signs**

- Scanty or absent menstrual periods
- Thinning hair
- Dry skin
- Cold or swollen hands and feet
- · Bloated or upset stomach

### **Psychological Signs**

- Distorted perception of self
- Inability to remember things
- Poor judgment
- Refusal to acknowledge the gravity of the illness

- Obsessive-compulsive behavior
- Depression irritability; insomnia; diminished interest in sex

# **Behavioral Symptoms**

- Unusual behaviors related to food or eating (for example, hoarding or concealing food, refusing to eat in public, eating only one type of food, ritually cutting food into tiny pieces, intense study of diets and calories, planning and preparing elaborate meals for others)
- Compulsive exercising
- Preoccupation with body size or body image
- Preoccupation with weight control, dieting

#### Causes

There is no specific cause of anorexia. These may include:

- Severe trauma or emotional stress (such as the death of a loved one or sexual abuse) during puberty or prepuberty.
- Abnormalities in brain chemistry. Changes in serotonin levels, a brain chemical that regulates appetite, may contribute to other symptoms of anorexia nervosa such as depression, impulsiveness, obsessive behaviors, or other mood disorders. In addition, the process of purging may deplete tryptophan, an amino acid necessary for the production of serotonin, leading to further imbalances.
- A cultural environment that puts a high value on thin or lean bodies.
- Overbearing, controlling, and critical parents who do not show emotional warmth.
  - A tendency toward perfectionism, fear of being ridiculed or humiliated, Family history of anorexia.
  - Infection. Some researchers report an association between betahemolytic streptococcal infection or

Epstein Barr virus (the virus that causes mononucleosis) and development of anorexia.

# Risk Factors

- Age and gender—anorexia is most common in teens and young adult women
- Early onset of puberty
- Living in an industrialized country
- Depression—although depression is associated with the development of anorexia, it does not cause the disorder.
- Obsessive-compulsive disorder
   (OCD) or other anxiety disorders—
   OCD is present in up to two-thirds of people with anorexia.
- Avoidant and/or narcissistic is personality disorder(s) approximately one-third of those with the restricting type of anorexia have avoidant personalities,
- Participation in sports and professions that put emphasis on a lean body Difficulty dealing with stress (pessimism, tendency to worry, refusal to confront difficult or negative issues)
- History of sexual abuse or other traumatic event
- Dieting

#### Diagnosis

The SCOFF questionnaire, developed in Great Britain, is proving to be a very reliable method for diagnosing anorexia. A "yes" response to at least two of the following questions is a strong indicator of an eating disorder:

- S "Do you feel sick because you feel full?"
- C "Do you lose control over how much you eat?"
- O "Have you lost more than 13 pounds recently?"
- F "Do you believe that you are fat when others say that you are thin?"
- F "Does food and/or thoughts of food dominate your life?"

Lab tests serve to determine blood count (to assess for signs of anemia that may be related to lack of iron or vitamin B12), levels of electrolytes (minerals such as potassium, calcium, and magnesium), amylase (serum amylase is elevated when

there is frequent vomiting), and protein, and kidney, liver, and thyroid functions. He or she may also order an electrocardiogram, which may be abnormal if there is a deficiency in an electrolyte or nutrient such as potassium or calcium. It is best for a person with anorexia to work with a multidisciplinary team including his or her primary care physician, a psychologist or psychiatrist, and a registered dietitian.

#### **Preventive Care**

The most effective prevention strategy is the development, from an early age, of healthy eating habits and a strong body image. Education about the life-threatening nature of anorexia is also an important part of prevention. In those who have already been diagnosed and treated for anorexia, avoiding recurrence of the eating disorder is the primary goal.

- Family and friends should be urged not to focus on the patient's condition or on issues of food or weight. Mealtimes, for example, should be reserved for social interaction and relaxation, without any discussion of the disease.
- Careful and frequent monitoring of weight and other physical signs by the physician can reveal signs of a relapse.
- Cognitive or other forms of psychotherapy can help the person to develop coping skills and change the unhealthy thought processes that underlie anorexia nervosa.
- Family therapy is helpful in addressing underlying contributing factors in the home environment and in enlisting the support and understanding of family members.

#### **Treatment Approach**

Cognitive-behavioral therapy, often in combination with antidepressants, is a very effective therapeutic approach for treatment of eating disorders. Complementary and alternative methods of treatment (such as the use of herbs and mind/body medicine) are valuable adjuncts to usual ways of stimulating appetite, addressing nutritional problems, and helping the patient to develop a healthier body image and to learn to deal more productively with stress.

Hospitalization may be necessary, particularly under the following circumstances:

- Continuing weight loss, in spite of outpatient treatment
- Body mass index (BMI; a measurement that takes into account a person's height and weight) 30% below normal; normal range is 19 to 24
- Irregular heart rhythm
- Severe depression
- Suicidal tendencies
- Low potassium levels
- Low blood pressure

Generally, adequate weight gain (1 to 2 pounds per week) and appropriate changes in behavior require a 10 to 12 week hospital stay. To avoid bloating, abdominal upset, and fluid retention, those who are severely malnourished may be started on a diet of 1,500 calories a day, gradually increasing to as much as 3,500 calories. Because anorexia triggers changes in metabolism, high caloric intake may be necessary to stimulate weight gain. Unfortunately, there is no completely effective treatment for anorexia nervosa, and recovery can take many years. Even after some weight gain, many people with anorexia remain quite thin and risk of relapse is very high. A number of influences the social environment may make recovery difficult:

- Friends or family who express admiration or envy of the patient's thinness
- Dance instructors or athletic coaches who put a premium on having a very lean body
- Denial on the part of parents or other family members
- A patient's persistent belief that emaciation is not only normal but attractive and/or that purging is the only way to avoid becoming overweight

Soliciting the involvement of friends, family members, and others in the treatment of the individual, with education for everyone regarding the gravity of the disease, may diminish these influences.

# Lifestyle

• Establishing regular eating habits and a healthy diet

- Developing a support system and participating in a support group for help with stress and emotional issues
  - Cutting back on exercise if obsessive exercise has been part of the disease. Once sufficient weight gain has been established, controlled exercise regimens can be a positive reinforcement for appropriate eating habits and a way to reduce gastrointestinal distress.

#### Medications

Anorexia nervosa in some ways resembles other major psychiatric disorders such as depression and obsessive-compulsive disorder, because some of the symptoms of these disorders, for example obsessive behavior, lack of enjoyment from life, and severely distorted perception of reality (in this case, of the body), are exhibited by people with anorexia. This has led to the use of antidepressants for anorexia, particularly selective serotonin reuptake inhibitors (SSRIs), because these drugs are first-line treatments for OCD and depression. Medications, however, do not work alone and must be used in conjunction with a multidisciplinary approach that includes nutritional interventions and psychotherapy.

# Serotonin Reuptake Inhibitors

Fluoxetine

Studies suggest that fluoxetine may increase weight and improve mood over several months in people with anorexia nervosa and depression

### Tricyclic Antidepressants

This class of antidepressants, including imipramine and desipramine, tend to be more effective for bulimia than anorexia.

Clomipramine

#### **Antihistamines**

Cyproheptadine

High doses of cyproheptadine hydrochloride, which is thought to stimulate appetite, the number of days necessary to achieve appropriate weight gain were decreased and depression was relieved in those with restricting type anorexia.

#### Hormones

Estrogen together with progesterone may be used to restore normal menstrual cycles.

# **Nutrition and Dietary Supplements**

Anorexics with low body weight, low BMI, and low serum albumin levels are at increased risk for vitamin and mineral deficiency. An important part of treatment is to include a multivitamin with minerals (particularly calcium).

# Vitamin B Complex

# Antioxidants

supplementation Currently, antioxidants is not part of standard care for is anorexia, but being explored scientifically.

#### Zinc

Zinc influences appetite, taste, smell, vision, and cognitive function and is an essential nutrient for protein synthesis, growth, and wound healing. The symptoms of zinc deficiency include loss of appetite, weight skin abnormalities, lack menstruation, and depression Restoring normal zinc levels increase the rate of weight gain

### Dehydroepiandrosterone (DHEA)

DHEA levels have been associated with bone mineral density, suggesting that this hormone may play a role in preventing bone loss and stimulating bone formation. In anorexia 50 mg of DHEA per day is able to restore normal levels of this and other such as estrogen testosterone, and show signs of protection from bone loss.

#### **Essential Fatty Acids**

To prevent the metabolic complications acid fatty essential associated with for deficiencies treatment programs anorexia nervosa include PUFA-rich foods such as organ meats and fish.

# Melatonin

Melatonin levels in people with anorexia may indicate who is likely to benefit from antidepressant medications.

#### Herbs

- (Angelica Angelica root archangelica)
- (Cnicus thistle herb Blessed benedictus)
- Gentian root (Gentiana lutea)
- (Cinnamomum bark Cinnamon verum)
- root and Dandelion herb (Taraxacum officinale)

In cases of significant weight loss where the muscles begin to deteriorate, recommend fenugreek seed foenum-(Trigonella graecum). Skullcap (Scutellaria lateriflora) may be used to relax the nerves and Roman chamomile (Chamaemelum nobile) may be used to treat depression associated with anorexia.

# Massage and Physical Therapy

The massaged adolescents reported lower anxiety levels and improved body image compared to adolescents with anorexia receiving only standard daily group therapy. Measurably reduced cortisol (a marker of stress) and increased dopamine (a brain chemical associated with relaxation) concentrations were also observed in the treatment group.

#### Homeopathy

A professional homeopath can provide supportive care to address various aspects of anorexia.

# Mind/Body Medicine

### Cognitive Behavioral Therapy

Cognitive-behavioral therapy is reported to be one of the most effective therapies for anorexia. .

#### Family Therapy

Family therapy is aimed, in part, at helping the parents or partner (in the case of an adult) understand the medical gravity of this illness and the ways in which they may be inadvertently contributing to it.

Hypnosis has been shown to be successful as part of an integrated treatment program for anorexia nervosa and the success may the number of sessions: depend on programs have generally individual involved 1-hour per week for 3 months followed by bi-weekly sessions treatment is no longer needed.

#### Biofeedback

Studies suggest that biofeedback may be helpful in reducing stress in people with anorexia.

#### Other Considerations Pregnancy

- Difficulty getting pregnant/carrying a pregnancy to term because of higher rates of infertility spontaneous abortion
- Increased risk of low birth weight babies and birth defects

- Malnourishment (particularly calcium deficiency) as the fetus grows
- Increased risk of medical complications
- Increased risk of relapse being triggered from the stress of pregnancy and/or parenthood

**Prognosis and Complications** 

Medical complications associated with anorexia include:

- Irregular heartbeat and heart attack
- Anemia, often related to lack of vitamin B12
- Low potassium, calcium, magnesium, and phosphate levels (particularly with binge-purge types)
- Increased cholesterol

- Hormonal changes (can lead to absence of menstrual periods, infertility, bone loss, and stunted growth)
- Osteoporosis
- Seizures and/or numbness in hands and feet
- Disorganized thinking
- Death (suicide is responsible for 50% of fatalities associated with anorexia)

The outlook for individuals with anorexia is variable, with recovery taking between 4 and 7 years. There is also a high chance of disease recurrence even after recovery.

# 13.Anxiety

"Back to nature means back to traditional healer"
-Anonymous.

Anxiety is a general feeling of being worried. Everyone experiences anxiety from time to time as a result of life experiences, but those with generalized 'anxiety disorder feel anxious frequently or excessively, not necessarily as a result of a particular situation.

# Signs and Symptoms

- Muscle tension, trembling
- Fast heartbeat (tachycardia)
- Fast or troubled breathing (dyspnea)
- Dizziness or impaired concentration
  - Palpitations
- Sweating
  - Fatigue
  - Irritability
  - Sleep disturbances

#### What Causes It?

Anxiety can result from many specific causes, such as an underlying medical condition or drugs. Factors such as genetics and early life experiences may play a role.

#### What is to be done

A physical examination blood or urine tests and ECG are required.

#### **Treatment Options Treatment Plan**

Short-term counseling can boost self-esteem and help learn coping strategies and

problem solving techniques. Trying a method of relaxation such as deep breathing techniques and drugs is helpful.

# **Drug Therapies Prescription**

Antianxiety Medications

 Benzodiazepines—a group of drugs that help to reduce anxiety and have sedating properties; may cause drowsiness, constipation, or nausea; not to take if there is narrow-angle glaucoma, a psychosis, or pregnancy

# Antidepressant Medications

 Tricyclic antidepressants—a group of drugs that relieve depression Complementary and Alternative Therapies

Mind-body techniques, nutrition, and herbs may be an effective way to treat anxiety. Progressive muscle relaxation, diaphragmatic breathing, biofeedback, meditation, and self-hypnosis can help you relax and reduce your anxiety. Do not read, eat, or watch TV in the bedroom. Avoid stimulating activities before going to bed, like reading a book, or exercising. Avoid alcohol and cigarettes before going to bed. Find some way to give the body and mind a break. Light a candle, stare at the aquarium,

play with your dog, go for a walk, smell a rose, soak in a warm bath, take a nap, or reward yourself with a massage--anything to break from the relentlessness of your routine.

# Nutrition

- Avoid caffeine, alcohol, sugar, refined foods, and cut down on foods that are known to cause allergies (common food allergens are dairy, soy, citrus, peanuts, tree nuts, wheat, fish, wheat, fish, eggs, corn, food colorings, and additives). Fresh vegetables, whole grains, and protein nourish the nervous system, so eat more of these.
- Calcium (1,000 mg per day), magnesium (400 to 600 mg per day), and B complex (50 to 100 mg per day) help support the nervous system and minimize the effects of stress.

#### Herbs

- Kava kava (Piper methysticum) for mild to moderate anxiety.
- St. John's wort (Hypericum perforatum) for anxiety associated with depression.
- Passionflower (Passiflora incarnata) for anxiety with insomnia.
- Oatstraw (Avena sativa) nourishes the nervous system.
- Lemon balm (Melissa officinalis) for anxiety with depression and heart palpitations.
- Lavender (Lavandula angustifolia) for nervous exhaustion and restoring the nervous system.
- Skullcap (Scutellaria lateriflora) relaxes and revitalizes the nervous system.

Kava kava (100 to 200 mg two to four times a day) and St. John's wort (300 mg two to three times per day) may be taken as dried extracts to maximize effectiveness in moderate anxiety. Essential oils of lemon balm, bergamot, and jasmine are calming and may be used as aromatherapy. Place several drops in a warm bath or atomizer, or on a cotton ball.

# Reishi (Ganoderma Lucidum)

Reishi tones the immune system, supports nerve function, scavenges free radicals,

protects the liver, and quells inflammation and allergies. "Reishi has the unique ability among medicinal mushrooms to calm and support nerve function." In his practice, he recommends reishi to people with chronic stress, anxiety, or insomnia.

#### Ashwaganda (Withania Somnifera)

Ashwaganda, also called Indian ginseng, has long been used by Ayurvedic practitioners as a rejuvenating tonic. This herb has anti-inflammatory, antitumor, antistress, antioxidant, immunomodulatory, and rejuvenating properties. This herb fortifies our ability to cope with stress, reduces anxiety, and also improves mental acuity, reaction time, and physical performance

#### Breathing

This is the one involuntary body function you can consciously control. The first step is to simply bring your breathing under control:

- Exhale completely.
- Then slowly take a deep breath in through your nose.
- Expand your diaphragm/belly to bring air into the lower portion of your lungs.
- As you gradually fill your lungs from bottom to top, expand your chest
- Even lift your shoulders for a last bit of fresh air.
- Then relax and let the air flow smoothly out of your body.
- Pull in your stomach at the end to expel the last bit of stress.
- Then begin another breath.

#### Homeopathy

- Aconitum for anxiety accompanied by irregular or forceful heartbeat, shortness of breath, or fear of death
- Arsenicum album for excessive anxiety that has no clear cause and is accompanied by restlessness, especially after midnight; also for perfectionists, including children, who worry about everything
- Phosphorus for an impending sense of doom and anxiety when alone; also for impressionable adults and children who are easily influenced by the anxiety of others

- Lycopodium for performance and other types of anxiety in those who are insecure, yet hide their low selfesteem with arrogance and bravado; also for children with anxiety accompanied by bedwetting
  - Gelsemium for performance anxiety resulting in diarrhea, headache, dizziness, weakness, shakiness and trembling, or trouble speaking
- Argentum nitricum for performance anxiety (such as before tests in school-age children) with rapid heart rate, feeling of faintness, diarrhea, or flatulence

## Acupuncture

Acupuncture may have some beneficial effect when used to treat anxiety directly. In the case of anxiety, a qi deficiency is

usually detected in the kidney or spleen meridians. In addition to performing needling techniques, acupuncturists may employ lifestyle and breathing techniques as well as herbal and dietary therapy.

## Massage

Therapeutic massage can be helpful in reducing anxiety and alleviating stress.

## Follow Up

Practice relaxation techniques

# **Special Considerations**

While the herbal tea suggested above is safe during pregnancy, avoid the dried extracts of kava kava and St. John's wort during

# 14.Appendicitis

"Be a healer and not just a doctor"

-Anonymous

Appendicitis is an inflammation of the appendix that is often caused by an obstruction, but it may be caused by an infection. Appendicitis is frequently misdiagnosed, since it mimics other diseases. If untreated, an inflamed appendix can rupture, causing infection of the peritoneal cavity and even death. Between 5 10% of the population develop appendicitis, usually in their teens and twenties.

# Signs and Symptoms

- Pain on the right side of the abdomen, usually beginning near the navel and moving down and to the right. The pain worsens when moving, taking deep breathes, coughing, sneezing, or touched in this area.
- Loss of appetite
- Nausea
  - Vomiting
  - Change in bowel movements, including diarrhea or inability to have a bowel movement or to pass
  - · Low fever that begins after other symptoms

- · Urinating frequently, or difficult or painful urination
- Bloating

# What Causes It?

Appendicitis usually occurs following an infection in the digestive tract, or when the tube connecting the large intestine and appendix is blocked by trapped feces. The resulting inflammation can result in infection or rupture of the appendix.

# Who's Most At Risk?

The following factors can put you at higher risk for developing appendicitis:

- Family history
- Children 2 years of age or younger and people 70 years of age or older are at higher risk for a ruptured appendix

What is to be done Conduct a physical exam to check for abdominal tenderness, and order blood tests and urine tests. Use ultrasound to check whether the appendix is inflamed (and to rule out ovarian abnormalities or ectopic pregnancy in women). A computed tomography (CT) scan may also be performed.

# **Treatment Options**

# Prevention

Eating a diet that includes green vegetables may decrease the likelihood of developing appendicitis.

# Treatment Plan

Appendicitis is most often treated with a combination of surgery, antibiotics and intravenous fluids, medication to control vomiting. Exploratory surgery is performed. And appendix is removed.

## **Drug Therapies**

Your provider may prescribe the following medications.

- Antibiotics
- Medications taken to ease nausea

# Surgical and Other Procedures

An appendicectomy. The surgeon then removes the appendix through one of the small incisions called laparoscopic appendicectomy

# Complementary and Alternative Therapies

Traditional Chinese Medicine (TCM) using herbs and/or acupuncture has been used to treat appendicitis

#### Nutrition

Eating green vegetables—particularly cabbages, cauliflowers, peas, beans, and Brussels sprouts—and possibly tomatoes may protect against appendicitis.

#### Herbs

Traditional Chinese herbal therapies may help treat appendicitis. Some examples of herbal therapies used in TCM include: detoxifying and fever-reducing herbs (*Flos*  lonicerae, Fructus forsythiae, Herba taraxaci, Patrinia scabioseafolia, Gypsum fibrosum), circulation-enhancing herbs (Semen persicae, Radix paeoniae rubra, Squama manitis, Spina gleditsiae), and laxatives (Rhizoma rhei, Mirabilitum depuratum).

### Homeopathy

Belladonna and Bryonia are classic homeopathic remedies often used for an inflamed appendix. Using the appropriate homeopathic remedy along with conventional Western medicine may relieve symptoms and help clear up appendicitis more quickly.

# Acupuncture

Acupuncture appears to help relieve pain, control peristalsis (the wave-like movements of muscles in the intestines), and improve blood flow. Even with surgery, acupuncture can be quite useful for anesthesia, pain control, and improved recovery.

#### Massage

Should not have a massage during acute inflammatory conditions such as appendicitis.

# **Prognosis/Possible Complications**

In cases where the appendix ruptures, the mortality rate is higher, and is especially high among the elderly (15%).

#### Follow Up

Review 2 weeks after the operation, and again at 6 weeks.

#### 15.Asthma

"When you were born the whole world rejoiced and you only cried."
-An old Indian

Asthma is a disease in which inflammation of the airways restricts airflow in and out of the lungs. The word asthma comes from the Greek word for "panting." In a person with asthma, muscles in the airways tighten and the lining of the air passages swells. The immune system gets involved, but instead of helping, it causes inflammation. Asthma is a disease of both adults and children. While there is no cure for asthma, it can be controlled.

# Signs and Symptoms

The primary symptoms of asthma include:

- Shortness of breath
- Wheezing usually begins suddenly; may be worse at night or early in the morning; aggravated by exposure to cold air, exercise, heartburn and relieved with the use of bronchodilators
- Chest tightness
- Cough (dry or with sputum) sometimes this is the only symptom

Call for emergency assistance if there is

- Extreme difficulty breathing or cessation of breathing
- Bluish color to the lips and face (called cyanosis)
- Severe anxiety
- Rapid pulse
- Profuse sweating
- Decreased level of consciousness (such as drowsiness or confusion)

Additional symptoms that may be associated with an asthma attack include:

- Flared nostrils
- Abnormal breathing pattern, in which exhalation takes more than twice as long as inhalation
- Use of the muscles between the ribs (called intercostals) to help with the increased work of breathing
- Coughing up blood (called hemoptysis)

#### Causes

Asthma is most likely caused by a combination of several factors such as allergens infections, dietary patterns, exercise, cigarette smoke, and stress.

#### **Risk Factors**

The following factors may increase the risk of developing asthma:

- Allergies Family history of asthma or allergies
- Cigarette smoke
- Food allergies It include eggs, milk, wheat, soy, peanuts, fish, shellfish, and sulfite food preservatives.
- Urban living
- Gender among younger children, asthma develops twice as frequently in boys as in girls, but after puberty it may be more common in girls
- Obesity –

#### **Triggers**

- Sensitivity to allergens
- Respiratory infections
- Air pollutants
- Changes in the weather, especially in temperature

# Other triggers include:

- Behaviors that affect breathing (exercising, laughing, crying, yelling)
- Stress

## Diagnosis

If asthma is suspected, pulmonary function tests will probably be done to measure, among other things, the volume of your lungs and how much air you exhale. Other tests may include chest and sinus x-rays, blood tests, or allergy tests.

#### **Preventive Care**

- Exclusively breastfeeding for the first 3 to 6 months of life can protect the child up to age two
- Delaying the introduction of solid food until age 6 months
- Manipulating the child's environment
- Apples and selenium-rich food in the diet may protect against asthma since they are high in antioxidants (namely, flavonoids).
- Key steps in preventing asthma attacks include identifying the allergens and the triggers such as

Viral infections (colds, flu, bronchitis, pneumonia)

Sinusitis and allergic rhinitis (hay fever or year-round allergies) – avoid seasonal allergens by staying indoor in air conditioning as much as possible Gastroesophageal reflux (heartburn) – avoid provoking foods, medication, and mealtime habits

Avoid the following altogether:

- If sensitive or allergic, aspirin and nonsteroidal anti-inflammatory drugs (NSAIDs)
- Beta-blockers including those in eye medication
- If sensitive or allergic, processed potatoes, shrimp, dried fruit, beer, and wine these often contain sulfite food preservatives

Allergy desensitization: Desensitization includes regular injections of the allergen (substance causing the allergic reaction) given in increasing doses (each dose is slightly larger than the previous one). The aim of desensitization is to gradually accustom the immune system to the allergen so that it no longer reacts to that substance.

**Treatment Approach** 

Emergency medications are needed during an asthma attack, but daily monitoring of asthma as well as a daily drug regimen are necessary in order to affect the course of the disease over the long term. Severe attacks of asthma require hospitalization for oxygen and medications that are given intravenously.

# Lifestyle

- Quit smoking
- Lose weight.
- Monitor your asthma every
- Keep a diary of respiratory complaints – this may help determine triggers

# Medications

Bronchodilators called short-acting betaadrenergic agonists (beta2-agonists such as albuterol, isoproterenol, metaproterenol, pirbuterol, terbutaline, bitolterol, and levalbuterol) and Other drugs such as theophylline and certain anticholinergic (like ipratropium agents Sometimes, steroids (such as prednisone, prednisolone, methylprednisolone, hydrocortisone) are needed (either taken by mouth or, if in the hospital, given intravenously) for an acute asthma attack.

Long-term disease control is necessary for those taking short-acting beta2 agonists more than twice a week. The standard agents for these purposes are inhaled corticosteroids (including beclamethasone, budesonide, dexamethasone, flunisolide, fluticasone, and triamcinolone). Others include leukotriene-antagonists (namely, montelukast and zafirlukast), and cromolyn. For those with moderate to severe asthma, and combinations of steroids medications (such as long-acting beta2 agonists or leukotriene-antagonists) proving to be effective for both treating and preventing asthma attacks. The intention of long-term therapy is to reduce inflammation and prevent injury to the lungs. The first selective anti-IgE therapy, a monoclonal anti-IgE antibody (omalizumab), binds with a receptor on IgE, reducing the amount of free IgE available to bind to antigen receptors on mast cells, basophils, and other involved in allergic responses. Hydergine is another useful drug by safely intracellular levels of boosting adenosine messenger cyclic molecule monophosphate (cAMP), which can reduce bronchial constriction.

# Nutrition and Dietary Supplements

It has been suggested that adding onion, garlic, pungent spices, and antioxidants (such as foods rich in vitamin C, vitamin E, flavonoids, and beta-carotene) to the diet may help reduce symptoms. Avoid common allergenic food that can cause an asthma attack include nuts, chocolate, fish, tomatoes and other nightshade plants, cow milk, eggs, and cheese. Also be wary of food colorings, MSG, and aspirin. Hydrochloric acid and pancreatin supplements are useful if asthma attacks are related to food sensitivity. These help break down food proteins, minimizing allergic reactions.

#### Magnesium

Intravenous magnesium can help in treating acute attacks of asthma in children over age 6 and adults and during an acute asthma attack, need for intravenous magnesium is assessed in a hospital setting.

#### N-acetylcysteine

N-acetylcysteine may help dissolve mucus and improve symptoms associated with asthma.

# Omega-3 Fatty Acids

Omega-3 fatty acid supplement (from perilla seed oil, which is rich in alphalinolenic acid [ALA], an important omega-3 fatty acid) may reduce inflammation and improve lung function. ALA is also found in flaxseed and flaxseed oil. Enriching with omega-3 fatty acids and reducing omega-6 fatty acids (from foods like meat, egg yolks, and certain cooking oils) improve the symptoms.

#### Potassium

Diets low in potassium are associated with poor lung function and improving dietary intake of potassium through foods such as fish, fruits, and vegetables may be preventing or treating asthma.

# Quercetin

Quercetin, which is a member of a group of antioxidants called flavonoids, inhibits the production and release of histamine and allergic/inflammatory substances. include supplements often Ouercetin also bromelain, which an antianti-allergy inflammatory agent. and Bromelain increases the absorption of quercetin.

#### Selenium

People with asthma tend to have low blood levels of selenium. Eating selenium-rich foods may have a protective effect against asthma.

#### Vitamin C

It may be useful for treating allergy-related conditions such as asthma.

#### Other

Other supplements that may have benefit for asthma include:

- Coenzyme Q 10 (CoQ10)
- · Lactobacillus acidophilus.
- · Lycopene and beta-carotene
- Vitamin B6 may be needed while taking theophylline because this medication can lower blood levels of this nutrient.

#### Herbs

#### Flaxseed

Omega-3 fatty acids (including flaxseeds) may decrease inflammation and improve lung function in adults with asthma.

# French Maritime Pine (Pinus pinaster)

Pycnogenol, a standardized extract of French maritime pine bark, rich in bioflavonoids, reduces asthmatic symptoms and circulating leukotrienes, and improves lung function in asthma patients

# Lobelia (Lobelia inflata)

It is considered an effective expectorant, but it is a potentially toxic herb, and safe only when used in combination with other herbs.

# Ginkgo leaf

Concentrated oral liquor (GLC) significantly reduces airway hyperreactivity and improves clinical symptoms pulmonary functions of asthma. Ginkgolide B an anti-inflammatory extract of ginkgo biloba inhibits platelet-activating factor (PAF), which is important in the pathogenesis of asthma. Ginkgolide B also inhibits unnecessary immune activation in asthmatics.

#### Licorice

It combats coughs and lung congestion. It works as a demulcent due to its high mucilage content, which soothes irritated mucous membranes. It can be as effective as codeine, and safer, when used as a cough suppressant. It also works as an expectorant to help with coughs by increasing the secretion of the bronchial glands.

#### Yerba mate

This helps relieve asthma and allergies by stimulating the adrenal glands to produce corticosteroids, which suppress inflammation and overactive immune responses to allergens. It also opens the respiratory passages to overcome asthma and allergy symptoms. Yerba mate's ability to relax muscles makes it useful for asthma since it dilates the bronchi (gas absorbers in your lungs).

Bee pollen prevents onset of allergenic symptoms in asthmatics due to the presence of quercetin, which inhibits the release of histamine in the body.

#### Other

Herbalists may select from the following herbs that have been used traditionally to treat asthma:

- Feverfew (Tanacetum parthenium)
- Goldenrod (Solidago virgaurea)
- Marshmallow (Althaea officinalis)
- Red Clover (Trifolium pretense)
- Wild Yam (Dioscorea villosa).

A key target for asthma (as well as arthritis) is the nuclear factor kappa B (NF-kappaB) transduction pathway, which activates many inflammatory cytokines. Some well-known plant chemicals that target NF-kappaB include several phenolics such as curcumin (in curcumin), and flavonoids, such as silybin (in milk thistle). More exotic botanicals such as Tylophora asthmatica, Boswellia serrata, and Petasites hybridus are worth checking into as well

#### Acupuncture

Acupuncturists may also perform a special type of massage therapy (called tui na), offer lifestyle counseling, provide instruction on specific breathing exercises, and prescribe herbal remedies.

# Chiropractic

Chiropractic therapy should be used in addition to (never as a substitute for) regular medical treatment for asthma.

# Massage and Physical Therapy

This technique reduces stress and induces relaxation.

# Homeopathy

 Arsenicum album - for asthma that generally worsens between midnight and 2 am and is accompanied by restlessness, anxiety, chills, and thirst

- Ipecacuanha for those with asthma, particularly children, who have significant tightness in the chest, a chronic cough with lots of phlegm that may lead to vomiting, and worsening of symptoms in hot, humid weather
- Pulsatilla for asthma with yellow or greenish phlegm that gets worse in the evening, in warm, stuffy rooms, or after consuming rich, fatty foods; this remedy is most appropriate for adults or children who are tearful and clingy or sweet and affectionate
- Sambucus for asthma that awakens a person at night with a sensation of suffocation; symptoms worsen when the person is lying down

### Mind/Body Medicine

Experts suggest that the following may prove helpful for people with asthma:

- · Education about asthma
- Hypnosis this may be especially useful in children because they are more easily hypnotized and can readily learn the technique.
- Yoga in addition to general relaxation and reduction of stress, several studies of people with asthma have suggested that lung function and exercise capacity may improve with the regular practice of yoga and that, eventually, the amount of medication taken may be reduced. The yoga that has been practiced in most of these studies has involved breathing exercises stretches pranayama), (called (known as postures in yoga), and Medication should meditation. without never be adjusted discussing this with doctor.
- Biofeedback
- Joining a support group

#### Ayurveda/Siddha

Boswellia serrata (also known as Salai guggal), an herb commonly used in Ayurvedic medicine improved lung function by pulmonary tests.

#### **Traditional Chinese Medicine**

It may include doing movement exercises that encourage particular breathing exercises and meditation. A few herbs of Traditional Chinese medicine include:

# **Asian Ginseng**

This may work is because ginsenoside, an active ingredient of ginseng, relaxes bronchial smooth muscle cells.

#### **Ephedra**

Ephedra (*Ephedra sinica*), Ephedra and its derivatives are potentially dangerous and addictive.

# Japanese Herbal Medicine Saiboku-to (TJ-96)

Saiboku-to does the Japanese government approve an herbal complex for the treatment of asthma, significantly improved symptoms and has anti-inflammatory effects.

#### **Other Considerations**

#### Exercise

Consult with doctor before starting an exercise program, and carry an inhaler at all times.

# Pregnancy

Women who are pregnant or breastfeeding should avoid the following:

- Ephedra and ephedra alkaloids such as ephedrine
- Goldenrod
- Lobelia
- Red Clover

# Warnings and Precautions

Flaxseed may interfere with the absorption of medication. Avoid taking it at the same time of day as medications and other supplements: You should never take more than 20 mg of lobelia per day. People with high blood pressure, heart disease, tobacco sensitivity, paralysis, seizure disorder, and acute shortness of breath as well as those recovering from shock should not take lobelia. Long-term treatment with theophylline for asthma may reduce blood levels of vitamin B6.

# Prognosis and Complications

Paying attention to mood and life stress and having adequate emotional support will help to ensure that self-care is consistent. Those who have occupation-related asthma may be able to reduce symptoms by wearing a protective respiratory mask.

# 16.Atherosclerosis; Arteriosclerosis; Coronary Artery Disease

"Observe due measure, for right timing is in all things the most important

fact.'

Atherosclerosis is a slow, complex disease in which fatty substances, cholesterol. cellular waste products, calcium, and other substances build up in the inner lining of an artery. This buildup is called plaque. Atherosclerosis is derived from the Greek words athero (meaning gruel or paste) and sclerosis (meaning hardness). effects of atherosclerosis depending upon which arteries in the body narrow and become clogged with plaque. For example, plaque buildup in the vessels that supply the heart with oxygen-rich blood may cause chest pain and lead to a heart attack while plaque buildup in the arteries that supply blood to the brain may result in a stroke. According to the Centers for Disease Control, heart disease is the leading cause of illness and death in the United States and most other Western countries. Close to one million deaths per year in the United States alone are attributable to heart disease, double the number of deaths from cancer. Because atherosclerosis is highly preventable and the risk factors are welldocumented, preventive measures such as lowering blood pressure and LDL ("bad") cholesterol levels, smoking cessation, losing weight, and increasing physical activity should be followed.

# Signs and Symptoms

Atherosclerosis shows no symptoms until a significant percentage (40%) of a vessel becomes obstructed with plaque and a complication occurs. Symptoms vary depending upon which arteries in the body narrow and become clogged with plaque.

Coronary Artery Disease (CAD)

CAD is caused by plaque buildup in the vessels that supply the heart with oxygenrich blood. When the tissues of the heart begin to become deprived of oxygen (ischemia), chest pain (angina) occurs. If the artery becomes completely blocked, cells in the heart begin to die and a heart attack may occur. Symptoms of CAD are usually triggered by physical exercise, sexual activity, and exposure to cold weather, anger, or stress. The most common symptoms of CAD include:

• Chest pain (generally a heavy, squeezing, or crushing sensation

- with possible burning or stabbing pains)
- Abdominal, neck, back, jaw, or shoulder/arm pain
- Nausea and vomiting
- Unexplainable fatigue and/or extreme fatigue after physical activity
- Weakness
- Perspiration
- Shortness of breath
- Depression and/or anxiety

#### Cerebrovascular Disease

Cerebrovascular disease is caused by plaque buildup in the arteries that supply the brain with oxygen-rich blood. Cerebrovascular disease causes transient ischemic attack (a sudden loss of brain function with complete recovery within 24 hours) and stroke. Symptoms may include:

- Weakness or paralysis on one side of the body
- Garbled speech and/or inability to comprehend speech
- Loss of vision in one eye
- Paralysis of facial muscles
- Muscle weakness
- Impaired senses
- Stupor
- Poor coordination
- Involuntary, jerky movements on one side of the body
- Rapid, repetitious, involuntary eye movement
- Vertigo

# Peripheral Artery Disease

Peripheral artery disease is caused by plaque buildup in the arteries that supply the extremities of the body (such as the hands and feet) with oxygen-rich blood. Symptoms may include:

- Pain, aching, cramps, numbness or sense of fatigue in the muscles of the lower extremities
- Diminished pulses in the extremities
- Decreased muscle mass
- "Bruits" (blowing sounds that the physician hears with a stethoscope that indicates turbulence in blood flow)

- Hair loss
- Thickened nails
- Smooth, shiny skin surface
- Skin that is cold to the touch
- Gangrene

#### Causes

researchers believe that Many atherosclerosis is caused by damage to the innermost layer of the artery known as the endothelium. High blood pressure, elevated LDL ("bad") cholesterol, an abnormal accumulation of homocysteine (an amino acid produced by the human body), tobacco diabetes, hormonal changes following menopause, and infection are all thought to contribute to endothelial damage. Once the endothelium is damaged, it becomes easier for fats, cholesterol, cellular products, calcium, and substances to become deposited in the artery wall. This buildup thickens the endothelium significantly. As a result, the diameter of the artery shrinks, blood flow decreases, and oxygen supply is dramatically reduced. Blood clots may also form on top of the plaque or damaged endothelium, thereby blocking the artery, and completely cutting off blood supply. Because many people do have the classic risk factors of atherosclerosis (such as cigarette smoking and high blood pressure), it is possible that there may be other contributing factors or such as atherosclerosis. causes of inflammation infection or from an autoimmune disease.

#### **Risk Factors**

- Male gender
- Lowered levels of the hormone estrogen following menopause
- Older age
- High blood pressure
- High LDL ("bad") cholesterol and/or high triglycerides
- Elevated homocysteine levels
- Low HDL ("good") cholesterol
- Family history of atherosclerosis (which may be related to learned behavior rather than genetic factors)
- Cigarette smoking and regular exposure to second-hand smoke
- Diabetes mellitus
- Insulin resistance
- Obesity, particularly in the abdominal region

- Sedentary lifestyle
- Diets high in saturated fat and trans fatty acids
- Stress
- Depression

### Diagnosis

A healthcare practitioner can determine your risk for heart disease by conducting a variety of tests. Blood tests detect elevated levels of cholesterol, homocysteine, and blood clotting factors. A stress test (otherwise known as an exercise tolerance test) monitors heart rate and blood pressure while an individual walks on a treadmill or rides a stationary bicycle. An electrocardiogram (ECG) is used during a stress test to measure and record the electrical activity of the heart. ECGs can abnormal heart rhythms, scar formation in the heart muscle from a prior heart attack, and areas of decreased blood flow when the heart is strained (as with physical activity). Advanced imaging techniques used during a stress test (such as an ultrasound) can determine precise areas of decreased blood flow to the heart. Angiograms (or angiography) can reveal arterial damage and plaque buildup.

#### **Preventive Care**

Making careful lifestyle choices is an important first step in preventing atherosclerosis. Some healthy habits include:

- Achieving and maintaining normal weight
- Controlling high blood pressure, high cholesterol, diabetes, and other disorders that may contribute to the buildup of plaque in arteries
- Avoiding cigarette smoking and second-hand smoke
- Eating a diet low in saturated and hydrogenated fats and cholesterol, and high in starches, fiber, fruits, and vegetables
- Exercising 3 hours per week or more (such as 30 minutes per day, 6 days per week)
- Reducing stress

#### **Treatment Approach**

Atherosclerosis shows no symptoms until a complication (such as chest pain or a heart attack) occurs. For this reason, lifestyle choices such as achieving and maintaining a

normal weight, lowering blood pressure and cholesterol, exercising regularly, quitting smoking, and reducing stress, are allimportant steps in preventing atherosclerosis. Once a complication occurs, however, surgery and other Procedures may be required to remove plaque from clogged arteries or to create a detour around a blocked artery. Medications are often prescribed to lower cholesterol or blood pressure and to prevent an initial or recurrent complication. Healthy designed to lower cholesterol, pressure, and excess body weight is essential in the treatment of atherosclerosis. Nutrition and dietary supplements, such as vitamin E, omega-3 fatty acids, and folate (vitamin B9) may be effective when used in addition to certain medications. Herbs, such as hawthorn, have also shown promise in lowering cholesterol levels and reducing the risk of heart disease.

#### Medications

# **Cholesterol-Lowering Drugs**

The following medications are used to prevent development of atherosclerosis and to reduce recurrent complications such as heart attack and stroke in those with the condition.

- Statins (such as lovastatin, pravastatin, simvastatin, atorvastatin, and fluvastatin)
  - Niacin
- Bile acid sequestrants (such as cholestyramine, colestipol, and colesevelam)
- Fibric acid derivatives (such as gemfibrozil, fenofibrate, and clofibrate)
- Probuchol

# **Blood Pressure Lowering Drugs**

The following medications are used to control blood pressure, prevent development of atherosclerosis, and slow the progression of the disease. They are also used to lower heart rate, thereby reducing the workload or strain on the heart.

- Beta-blockers (such as acebutolol, atenolol, metoprolol, nadolol, and propranolol)
- Angiotensin-converting enzyme (ACE) inhibitors (such as benazepril, captopril, enalapril, lisinopril, and ramipril)

- Calcium-channel blockers (such as amlodipine, felodipine, nifedipine, nicardipine, and verapamil)
- Alpha/beta blockers (such as labetalol)

# Blood Thinning Drugs, Platelet Inhibitors

- Aspirin—first choice platelet inhibitor for preventing and treating atherosclerosis; reduces risk of transient ischemic attack (TIA), stroke, and heart attacks
- Ticlodipine—for individuals who can not take aspirin (due to allergies, for example) or do not improve from aspirin; has more side effects than aspirin
- Dipyridamole—not as effective as aspirin when used alone but may be used in combination with aspirin or warfarin (another blood thinner); often used after bypass surgery
- Clopidogrel—reduces risk of heart attacks
- Glycoprotein IIb/IIIa receptor agonists (such as abciximab, eptifibatide, lamifiban, and tirofiban)—used when awaiting or just following an angioplasty

# **Blood Thinning Drugs, Anticoagulants**

- Heparin—used intravenously in the hospital following a TIA, stroke, or heart attack
- Low molecular weight heparinadministered by self-injection following a stroke or for coronary artery disease
- Warfarin—used to prevent stroke in individuals who have irregular hearl rhythms

# **Blood Thinning Drugs, Thrombolytics**

The following medications are used in the hospital just after a heart attack. They are most effective when used within three hours of a stroke or heart attack.

- Recombinant Tissue Plasminogen Activator (rTPA)
- Streptokinase
- Urokinase

# Other Medications

Nitrates—used to relax the vessels that supply the heart with blood; these medications reduce chest pain

# Surgery and Other Procedures

An angiography (an X-ray examination of blood vessels) is often performed to determine whether a surgical or other procedure is necessary. In the case of atherosclerosis, this test is performed to examine blood vessels in a particular location such as the heart, brain, or lower extremities. Several different procedures (surgical and non-surgical) may be performed depending upon the location and severity of atherosclerosis

### Non-surgical techniques

The following nonoperative techniques may be performed on individuals with coronary and peripheral artery disease:

- Angioplasty—a procedure used to widen narrowed arteries. A surgeon inserts a catheter with a deflated balloon into the narrowed part of the artery. The balloon is inflated, widening the inner diameter of the blood vessel so blood can flow more easily. The balloon is then catheter the deflated and removed. This procedure may also placement of include the permanent stent (wire mesh) that holds the artery open and improves blood flow. Angioplasty with stent placement is considered the safest and most effective procedure for atherosclerosis.
- Atherectomy—a procedure to remove plaque from the arteries using a laser catheter or a rotating shaver
- revascularization-a Laser procedure in which a laser creates multiple channels through the heart muscle into the main pumping These heart. of the chamber channels fill with blood from the then which chamber, pumping needed and oxygen supplies nutrients to the heart muscle. It is used to relieve severe chest pain in individuals who have no other treatment options.

# **Surgical Procedures**

Bypass surgery—a procedure that reroutes or bypasses blood around clogged arteries to improve blood supply to affected areas such as the heart or the lower extremities Minimally invasive bypass surgery—this procedure creates a small incision rather than the broad opening in the chest wall created during regular bypass surgery Endarterectomy—a procedure primarily used to remove plaque in the carotid (a major artery located in the front of the neck) or peripheral arteries

# **Nutrition and Dietary Supplements**

Healthy eating habits can help reduce high blood cholesterol, high blood pressure, and excess body weight - three of the major risk factors for heart disease. The American Heart Association (AHA) has developed dietary guidelines that help lower fat and cholesterol intake and reduce the risk of heart disease. The main goal of these guidelines is to promote an overall healthy eating pattern, maintain an appropriate body weight, and reach desirable cholesterol and blood pressure levels. The AHA does not recommend very low-fat diets as these diets may lead to deprivation of essential fatty acids as well as an undesired reduction in HDL ("good") cholesterol levels. The AHA also advises against high-protein diets due to the lack of scientific evidence supporting their weight-loss effectiveness or any other claims of health benefits. In general, Western diets are considered to be too high in protein, particularly animal protein. In adults, high levels of protein can cause kidney damage and bone loss.

The AHA recommends the following to prevent the development or progression of atherosclerosis:

- A variety of fruits and vegetables (5 to 9 servings/day)
- A variety of grain products, with an emphasis on whole grains (6 or more servings/day)
- At least 2 servings of fish per week
- Limit total fat intake to <30% and saturated fat to <10% of energy. Replace dietary saturated fats and with acids trans fatty monounsaturated and polyunsaturated fats foods rich in omega-3 fatty acids). Food sources of omega-3 fatty acids include fatty fish (such as salmon), flaxseed and flaxseed oil, soybean oil, canola oil, and nuts.

- Limit dairy products to low-fat or fat free items (2 to 4 servings/day)
- Limit sodium intake to 6 grams per day
- Limit alcohol intake to 2 drinks/day for men and 1 drink/day for women
- Maintain a healthy body weight by matching calorie intake to energy needs; this includes a moderate level of regular physical activity (30 to 60 minutes within target heart range most days per week)

In addition to the recommendations listed above, the AHA suggests that individuals who have heart disease or are at a high risk of developing heart disease consider the more specialized diets below:

# Diets for People with High Cholesterol

National Cholesterol Education Program (NCEP) recommends saturated fat intake of no more than 7% of total calories, cholesterol limited to less than 200 mg/day, little to no trans fatty acids (such as fried foods), intake of both plant stanols/sterols (2 grams/day) and soluble fiber (10 to 25 grams/day), weight loss, and exercise. Studies have also shown that replacing dietary animal protein with soy protein may reduce total cholesterol, LDL ("bad") cholesterol, and triglycerides (a major form of fat in the blood) without affecting HDL ("good") cholesterol levels. The AHA also recommends a diet high in unsaturated fat diet rather than a very low-fat diet for individuals with atherogenic dyslipidemia (a condition marked by high triglycerides, low HDL cholesterol, obesity, high pressure, and/or diabetes).

# Diets for People with High Blood Pressure

The Dietary Approaches to Stop Hypertension (DASH) diet emphasizes a diet rich in fruits, vegetables, and low-fat or non-fat dairy products to provide high intake of potassium, magnesium, and calcium sources. Sodium intake should be less than 6 g/day. Weight loss, regular physical activity, and limiting of alcohol intake are also very important factors for lowering blood pressure.

#### Mediterranean Diet

The Mediterranean Style Diet is comprised of whole grains, fresh fruits and vegetables, fish, olive oil, and moderate, daily wine

consumption. Unlike the AHA diets, the Mediterranean Style Diet is not low in all fats; it is low in saturated fat but high in monounsaturated fatty acids. In a long-term study of 423 patients who suffered a hean attack, those who followed a Mediterranean Style Diet had a 50% to 70% lower risk of recurrent heart disease compared controls who received no special dietary counseling. The intervention emphasized bread, root green vegetables, daily intake of fruit, fish and poultry, olive and canola oils, margarine high in alpha-linolenic acid (an omega-3 polyunsaturated fatty acid found in flaxseed, and canola oil), along discouragement of ingestion of red meat and total avoidance of butter and cream.

# Supplements and Vitamins Folic Acid, Vitamin B6, Vitamin B12, Betaine

Many studies indicate that patients with elevated levels of the amino homocysteine are roughly 1.7 times more likely to develop coronary artery disease and 2.5 times more likely to suffer from a stroke than those with normal levels. Homocysteine levels are strongly influenced by dietary factors, particularly vitamin B9 (folic acid), vitamin B6, vitamin B12, and betaine. These substances help break down homocysteine in the body. Some studies have even shown that healthy individuals who consume higher amounts of folic acid and vitamin B6 are less likely to develop atherosclerosis than those who consume lower amounts of these substances. Despite these findings, the AHA reports that there is insufficient evidence suggest to supplementation with betaine and vitamins reduce the risk of atheroscerlosis or that taking these supplements prevents the development or recurrence of heart disease. The AHA does not currently recommend population-wide homocysteine screening, and suggests that folic acid, as well as vitamin B6, B12, and betaine requirements be met through diet alone. Individuals at high risk for developing atherosclerosis however should be screened levels of homocysteine. elevated levels are detected, a healthcare recommend practitioner may supplementation.

# Omega-3 Fatty Acids

There is strong evidence that omega-3 fatty acids (namely EPA and DHA) found in fish oil can help prevent and treat atherosclerosis by inhibiting the development of plaques and blood clots. In one study of 223 patients with coronary artery disease, those who received fish oil supplements daily for 2 demonstrated a significant improvement in symptoms compared to those who did not receive the supplements. A second study of heart attack survivors found that daily supplementation with omega-3 fatty acids dramatically reduced the rate of death, subsequent heart attacks, and stroke.

#### L-Carnitine

Studies suggest that patients, who take L-carnitine supplementation soon after suffering a heart attack may be less likely to suffer a subsequent heart attack, die of heart disease, and experience chest pain and abnormal heart rhythms. In addition, people with coronary artery disease who use L-carnitine along with standard medication may be able to sustain physical activity for longer periods of time.

# Antioxidants

Evidence suggests that antioxidants may prevention the role in atherosclerosis. Antioxidants are believed to prevent fatty buildup in the arteries by suppressing the oxidation of LDL ("bad") cholesterol. They may also reduce the likelihood of blood clot formation and may help relax blood vessels thereby improving blood flow. Currently, however, combined data from epidemiological studies and clinical trials do not provide convincing evidence for the benefits of antioxidant supplementation, as opposed to intake from dietary sources.

### Vitamin E

Population-based studies suggest that vitamin E supplements may help prevent the development and progression of heart disease. Several recent well-designed, large-scale studies comparing vitamin E to placebo, however, have not confirmed these findings. More research is currently underway to determine whether vitamin E helps protect against atherosclerosis.

# Vitamin C

A few studies suggest that consuming high levels of vitamin C may protect against

heart disease, but not all studies confirm this relationship. It is recommended that people who have low levels of this nutrient should take vitamin C (either through diet or supplements) to prevent atherosclerosis and its complications.

#### Beta-carotene and other carotenoids

Despite beliefs by the scientific community and the general public, beta-carotene does not appear to protect against atherosclerosis and may even increase the risk atherosclerosis complications in people who smoke. There is some preliminary evidence, however, that other carotenoids (such as lutein and zeaxanthin), particularly from dietary sources, may prevent plaque buildup in carotid blood vessels. More research is needed to determine whether carotenoids may be helpful in the prevention of atherosclerosis.

#### Selenium

Low blood levels of this antioxidant may worsen atherosclerosis. Cigarette smoking and alcohol ingestion are believed to contribute to selenium deficiency. It is not known, however, whether selenium supplementation has any influence on the development or progression of atherosclerosis.

# Coenzyme Q10 (CoQ10)

Researchers believe that CoQ10 inhibits blood clot formation and boosts levels of antioxidants. One study found that people who received daily CoQ10 supplements within 3 days of a heart attack were significantly less likely to experience subsequent heart attacks and chest pain and were also less likely to die of the condition than those who did not receive the supplements.

#### Flavonoids

Test tube, animal, and some population-based studies suggest that the flavonoids quercetin, resveritrol, and catechins (all found in high concentration in red wine) may help reduce the risk of atherosclerosis. By acting as antioxidants, their nutrients appear to protect against the damage caused by LDL cholesterol. Rigorous studies in humans are needed to confirm these findings.

#### Vitamin D

Low levels of vitamin D may increase the risk of calcium build-up in the arteries, a

significant component of atherosclerotic plaque. Atherosclerotic plaque build up in blood vessels can lead to a heart attack or stroke. More research is needed to understand the practical implications of this possible relationship between low vitamin D levels and atherosclerosis.

#### Melatonin

Low levels of melatonin in the blood have been associated with heart disease, but it is not clear, whether melatonin levels are low in response to having heart disease or if low levels of melatonin predispose people to developing this condition. In addition, several studies in rats suggest that melatonin may protect the hearts of these animals from the damaging effects of ischemia. Herbs

- Hawthorn (Crataegus monogyna):
   Used traditionally as a remedy for cardiovascular diseases. Animal and laboratory studies demonstrate that this herb has antioxidant properties that help protect against the formation of plaques and may help control high cholesterol and high blood pressure.
- Garlic (Allium sativum): Clinical trials have shown that fresh garlic and garlic supplements may lower cholesterol levels, prevent blood clots, and destroy plaque.
- Green Tea (Camellia sinensis):
   Population studies indicate that the antioxidant properties of green tea may prevent atherosclerosis, particularly coronary artery disease.
- Gugulipid (Commiphora mukul):
  Used in Ayurvedic medicine to treat
  high cholesterol levels. Certain
  ingredients in this herbal remedy
  may have antioxidant properties and
  may therefore convey health
  benefits similar to hawthorn, garlic,
  and green tea.
- Pseudo ginseng root/notoginseng root (Panax notoginseng): Used in Traditional Chinese Medicine to treat chest pain and coronary artery disease. Laboratory studies suggest this herb may help prevent blood

clots and protect against the formation of plaques.

# Acupuncture

Acupuncture may be particularly useful for reducing risk factors for heart disease. It is considered an excellent treatment for people who wish to quit smoking and some studies indicate that it may aid in weight loss as well as cholesterol and blood pressure reduction.

# Homeopathy

Although few studies have examined the effectiveness of specific homeopathic remedies, professional homeopaths would recommend appropriate treatments to reduce the risk of atherosclerosis based on their knowledge and experience. Homeopathic prescriptions for atherosclerosis would include remedies to lower high blood pressure and cholesterol.

# Massage and Physical Therapy

Although few studies have examined the effectiveness of massage therapy on atheroslerosis, massage has a relaxing effect and it has been shown to reduce stressrelated hormone levels. Lowering stress hormone levels positively influences cholesterol and blood pressure and may therefore reduce the risk of heart disease. In addition, relaxation techniques may help individuals comply with habits necessary to reduce risk of atherosclerosis, such as dieting, quitting smoking, and exercising. Also, at least one study has found that massage can lower blood pressure.

# Other Considerations Prognosis and Complications

Some complications of atherosclerosis include:

- Coronary artery disease
- Heart failure which leads to fluid buildup in the lungs and legs
- Abnormal heart rhythms
- Stroke
- Heart attack
- Inadequate blood supply to certain parts of the body (such as the lower limbs or gastrointestinal tract)
- Kidney failure
- Death

# (17)Attention deficit/hyperactivity disorder (ADHD)

"What a stupendous, what an incomprehensible machine is (the human body)!"

Attention deficit/hyperactivity disorder (ADHD) is the most commonly diagnosed behavioral disorder of childhood, estimated to affect between 3% and 5% of schoolaged children. The core symptoms ADHD include inattention, hyperactivity, and impulsivity. Although many people occasionally have difficulty sitting still, paying attention, or controlling impulsive behavior, these behaviors are so persistent in people with ADHD that they interfere with daily life. Generally, these symptoms appear before the age of 7 years and cause significant functional problems at home, in school, and in various social settings. Oneto two-thirds of all children with ADHD (somewhere between 1% and 6% of the general population) continues to exhibit ADHD symptoms into adult life. Diagnosis is difficult (usually requiring more than one visit) but essential, as early treatment can substantially alter the course of a child's educational and social development.

# Signs and Symptoms Symptoms of Inattention

- Fails to pay close attention to details or makes careless mistakes
- Has difficulty sustaining attention in tasks or play activities
- Does not seem to listen when spoken to directly
- Does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace
- Has difficulty organizing tasks and activities
- Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort
- Loses things necessary for tasks or activities
- Is easily distracted by extraneous stimuli
- Is forgetful in daily activities

# Symptoms of Hyperactivity and Impulsivity

- Fidgets with hands or feet or squirms in seat
- Leaves seat in situations where remaining seated is expected
- Runs or climbs excessively in inappropriate situations (in adolescents or adults, may be limited to subjective feelings of restlessness)
- Has difficulty playing or engaging in leisure activities quietly
- · Acts as if "driven by a motor"
- Talks excessively
- Blurts out answers before questions are completed
- · Has difficulty awaiting turn
- Interrupts or intrudes on others

#### Causes

neurobehavioral complex Like most disorders, the cause of ADHD is unknown. Genetic factors as well as those affecting brain development during prenatal and postnatal life are likely involved. Brain scans have revealed a number of differences in the brains of ADHD children compared those of non-ADHD children. For example, many children with ADHD tend to have altered brain activity in the prefrontal cortex, a region thought to be the brain's command center. Irregularities in this area may impair an individual's ability to control hyperactive behaviors. and impulsive Researchers also believe that hyperactive behavior in children results from excessive slow-wave (or theta) activity in certain regions of the brain. Other studies indicate that abnormally low levels of dopamine, a neurotransmitter involved with mental and emotional functioning, may cause ADHD.

#### Risk Factors

Heredity: children with ADHD
usually have at least one firstdegree relative who also has ADHD
and one-third of all fathers who had
ADHD in their youth have children
with ADHD

- Gender: ADHD is four to nine times more common in boys than in girls (some experts believe that the disorder is underdiagnosed in girls, however)
- Prenatal and early postnatal health: maternal drug, alcohol, and cigarette use; exposure of the fetus to toxins, including lead and polychlorinated biphenyls (PCBs); nutritional deficiencies and imbalances
- Learning disabilities, communication disorders, and tic disorders such as Tourette's syndrome
- Other behavioral disorders, particularly those that involve excessive aggression (such as oppositional defiant or conduct disorder)
- Nutritional factors (controversial): allergies or intolerances to food, food coloring, or additives

### Diagnosis

The names and symptoms for ADHD have changed frequently since the turn of the century. What is now referred to as ADHD has been described in the past as Minimal Brain Dysfunction, Hyperkinetic Reaction Childhood, of and Attention Deficit Disorder (ADD) with or Without Hyperactivity. The name ADHD was adopted in 1987 by the third revision of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R).

Diagnosis is largely dependent on specific observed behaviors. The first step in establishing the diagnosis of ADHD is to determine whether the individual meets the diagnostic criteria as defined in the DSM-IV. The DSM-IV's symptomatic criteria were developed for children; there are no specific criteria for ADHD in adults. In these cases, physicians will often determine the psychiatric status of the adult patient as a child and make a retroactive diagnosis of childhood ADHD. Since most of the characteristic behaviors of childhood ADHD occur at home and in the school parents and teachers play important role in providing information to establish the diagnosis.

## DSM-IV Diagnostic Criteria:

- Either (1) or (2) 1.Six (or more) symptoms inattention that persist for at least 6 months to a maladaptive degree with inconsistent the child's developmental level 2.Six (or more) symptoms of hyperactivity-impulsivity persist for at least 6 months to a maladaptive degree inconsistent with the child's developmental level
- Some inattentive or hyperactiveimpulsive symptoms that caused impairment were present before the age of 7 years
- Some impairment from symptoms present in two or more settings (such as at school/work and home)
  - Clear evidence of significant impairment in functioning
  - Symptoms not secondary to another psychological disorder (such as mood disorder, anxiety disorder)

Although most children with ADHD have symptoms of both inattention and hyperactivity-impulsivity, some tend to demonstrate symptoms from one cluster or the other. These specific subtypes of ADHD are based on the predominant symptom pattern exhibited for the past 6 months:

- ADHD, Combined Type: if both Al and A2 criteria are met
- ADHD, Predominantly Inattentive Type: if A1 is met but A2 is not

ADHD, Predominantly Hyperactive-Impulsive Type: if A2 is met but A1 is not Preventive Care

There are no targeted prevention programs for ADHD. Nevertheless, the following steps may be taken to help reduce the risk of neurobehavioral disorders including ADHD:

- Minimizing exposures to potential neurotoxins (such as lead, heavy metals, pesticides, herbicides) in the environment
  - Screening children for high levels of lead in the blood and treating this immediately
  - Obtaining comprehensive healthcare during and immediately following pregnancy
  - Addressing psychosocial stressors in the lives of all children

Treatment Approach

Despite the effectiveness of stimulant medications, multiple strategies are required to effectively manage ADHD over the longterm. A combination of prescription drugs and lifestyle changes, including behavioral therapies, is proving to be the best option for many children. Currently, the most accepted treatments include individual and family education, behavioral therapy, school remediation, and social skills training. Although nutritional management (such as elimination diets and high-dose vitamin supplementation) is among the most frequently explored alternative therapy among parents, relatively few studies support its effectiveness for ADHD. A growing number of studies suggest an association between essential fatty acid (EFA) deficiencies and hyperactivity in children, yet intervention studies using EFAs to treat behavioral problems have reported varying results. Preliminary evidence also indicates that homeopathy and particularly techniques. biofeedback, may significantly improve behavior among children with ADHD.

Lifestyle

There are two basic ways to manage hyperactive children: change the child's environment or change the child. The former can be accomplished by actively modifying a child's social and family interactions, a process that usually begins with parental training. The latter involves stimulant medication and other interventions discussed in the sections that follow. Notably, a recent study sponsored by the National Institute of Mental Health (NIMH) indicated that a comprehensive treatment regimen that combines medication with intensive behavioral interventions is among the most effective treatments for elementary school children with ADHD. Parental training offered by skilled clinicians provides parents with tools and techniques for managing their child's behavior. Rewarding appropriate behavior discouraging behavior destructive accomplish behavior modification. Parents are taught to be as consistent as possible in their discipline and to deliver praise and punishment that is appropriate to their child's developmental level. For example, older children with ADHD may be rewarded

with points or tokens, or even written behavioral contracts with their parents. Creating charts with stars for good behavior may be more effective for younger children. Positive reinforcement must also be counterbalanced by swift and consistent consequences for undesirable behavior. The following disciplinary strategies have been shown to effectively distinguish undesirable behavior:

- Establish rules that are easily understood, developmentally appropriate, and not unduly harsh
- Avoid repeated commands once the child has been reminded of the consequences
  - Discipline the child before becoming too angry and frustrated
  - Follow disciplinary actions with praise when the child adheres to the rules and behaves appropriately

In addition to behavioral intervention at home, modifications in the classroom environment (and/or work, in the case of adolescents or adults) are significant aspects of the treatment plan. Hyperactive children do best in highly structured circumstances under the direction of a teacher experienced in handling their disruptive behavior and capable of adapting to their distinctive cognitive style. Since group interactions are often particularly challenging, social skills training, appropriate classroom placement, and explicit rules of engagement with peers are essential. Adults with ADHD may benefit from a variety of behavioral including cognitive interventions remediation, couple therapy, and family therapy.

#### Medications

NIMH. stimulant to the According medications are the most widely researched and commonly prescribed treatments for ADHD. Although researchers do not fully understand how these medications improve ADHD symptoms, studies indicate that significantly increases methylphenidate dopamine levels in the brain. People with ADHD are believed to have abnormally low of dopamine in the Approximately 70% of people with ADHD benefit from the first stimulant prescribed (usually methylphenidate), and an additional 20% may respond to one of the other two drugs in this class if the first did not work. The NIMH reports that the two most effective treatments for children with ADHD are a closely monitored medication treatment and a treatment that combines medication with intensive behavioral interventions. Stimulant medications prescribed for ADHD include:

- Methylphenidate: most commonly used medication for ADHD: effective in 75% to 80% of patients; not recommended for children under 6 years of age
- Dextroamphetamine: effective in 70% to 75% of patients; recommended for children under 3 years of age
- Pemoline: effective in 65% to 70% of children; not recommended for children under 6 years of age; should not be considered the firstchoice medication for ADHD because its use has been associated with liver failure

The following medications recommended for those who do not improve from stimulants:

- Alpha<sub>2</sub>-agonists (such as clonidine, guanfacine): helpful in individuals who are particularly aggressive or oppositional; may cause low blood pressure in some individuals
- Antidepressants: bupropion children who also have mood disorders such as depression; tricyclics (such as imipramine) for individuals who also have tic disorders or significant symptoms of anxiety and depression

**Nutrition and Dietary Supplements** 

According to a recent survey, nutritional therapies are the most commonly used alternative treatment among American children with ADHD. Dietary management of ADHD takes two basic forms: restriction and supplementation.

# **Dietary Restrictions** Additives and allergies

In 1975, Benjamin Feingold, a practicing allergist, proposed that artificial colors, flavors, and preservatives, as well as naturally occurring salicylates (found in many fruits and vegetables), were a major cause of hyperactive behavior and learning

disabilities in children. According to his observations, eliminating all of these substances dramatically improved ADHD symptoms in 50% of children, and reintroducing them one at a time caused the symptoms to recur. Feingold's hypothesis however, was based solely on experience and speculation rather than scientific validation. A 1986 review of studies assessing the Feingold diet determined that only 1% of children consistently improved on the elimination diet and only 10% developed symptoms when challenged with artificial dyes specifically. Although the original Feingold diet has shown no consistent benefit for ADHD children, a number of well-designed studies have found an association between certain dietary constituents and poor behavior in children. One such study assessed the effects of food coloring on behavior in 34 hyperactive children and 20 children with no behavioral problems. All children were maintained on color-free diet and were randomly given one colorless capsule containing either lactose (placebo) or tartrazine (yellow food coloring) at varying doses each morning for 21 days. Twenty-four of the 54 children became more irritable and restless after taking tartrazine, whereas all of the children behaved normally when given placebo. In a similar study of 26 children with ADHD, behavior improved on days when certain foods (corn, wheat, milk, soy, oranges, and food coloring) were eliminated from the diet. Behavior worsened on days when these same foods were re-introduced to the diet Notably, most of the children who demonstrated an improvement in behavior with these restrictive diets in both of the studies described also had a history of allergies (such as asthma and allergic rhinitis). Eggs, peanuts, and fish are foods believed to carry a high risk of causing and allergic reaction. Some researchers speculate that eliminating these foods from the diet may improve symptoms of ADHD in certain children. Elimination diets however, should only be used under the guidance and direction of a registered dietician because of the potential risk of malnourishment.

Sugar and Artificial Sweeteners

There are virtually no scientific studies supporting the widespread belief that sugal consumption causes or worsens ADHD behavior. In one study, children who consumed diets high in sugar or high in artificial sweeteners behaved no differently than children who consumed diets free of these substances. This was true even among children whose parents described them as having sensitivity to sugar. A review of 12 studies also failed to find any evidence that ingestion of sugar (including candy and chocolate) worsens behavior among children with ADHD.

## Dietary supplements

A well-balanced diet rich in micronutrients is essential for normal brain development, particular in young children. In fact, many children with nutrient deficiencies have significant cognitive and behavioral problems. These conditions, however, are extremely rare in children living in industrialized countries like the United States. Nevertheless, children with ADHD tend to have irregular eating habits and are therefore at slightly increased risk for mildly deficient certain becoming in nutrients.

# Megavitamin therapy

Using high-dose vitamin treatment (up to 10 times the recommended daily allowance) has been advocated as a treatment for many chronic conditions, including ADHD. However, there is no consistent evidence that megavitamin therapy is of benefit in hyperactive children, and, in some cases such therapy may actually have toxic effects.

### Magnesium

Symptoms of magnesium deficiency include irritability, decreased attention span, and magnesium Mild mental confusion. deficiency is not uncommon in normally nourished children, and some believe that children with ADHD may be exhibiting the effects of mild magnesium deficiency. In one study of 116 children magnesium with ADHD. 95% were deficient. study, separate In a magnesium-deficient children with ADHD receive to assigned randomly magnesium supplements in addition to standard treatment or standard treatment alone for 6 months. Those who received significant magnesium demonstrated a whereas the improvement in behavior, control group exhibited worsening behavior.

### Vitamin B6

Adequate levels of vitamin B6 (pyridoxine) are required for normal brain development and are essential for the synthesis of essential brain chemicals including serotonin, dopamine and norepinephrine. A preliminary study found that pyridoxine was slightly more effective than methylphenidate in improving behavior among hyperactive children.

#### Iron

Iron deficiency is common among children adolescents, particularly in lower socioeconomic groups where it affects half of all infants. Normal levels of iron in the blood are necessary for optimal brain function. Symptoms of iron deficiency include decreased attention, arousal, and responsiveness. There is scientific evidence, however, that iron supplementation in those who are deficient improves behavior in children with ADHD. Since iron can be toxic in children who are not deficient, there is little justification for its supplementation as treatment for ADHD in those with normal levels of this mineral.

### Zinc

Zinc the activity of regulates neurotransmitters, fatty acids. melatonin, all of which are related to the biology of behavior. Children with ADHD have significantly lower blood zinc levels children without ADHD. ADHD children with mild zinc deficiency may be less likely to improve from a commonly prescribed stimulant than children with adequate zinc levels.

### Melatonin

Although melatonin supplementation probably has no direct effect on the primary symptoms of ADHD, it may be effective in managing sleep cycle disturbances in children with a variety of developmental disorders, including ADHD.

### **Essential Fatty Acids**

Fatty acids play a key role in normal brain function. Since the body cannot synthesize essential fatty acids (EFA), they must be provided in the diet. There are two major types of EFAs: omega-3 fatty acids (found in cold-water fish such as salmon, mackerel, halibut, and herring) and omega-6 fatty acids (found in commonly used cooking oils, such as sunflower oil, safflower oil, corn oil, and soybean oil). Omega-3 fatty

acids are highly concentrated in the brain and appear to play a particularly important role in cognitive and behavioral function. Specific enzymes convert EFAs [ALA] into other substances known as long-chain polyunsaturated fatty acids (PUFAs). PUFAs, including eicosapentaenoic acid (EPA) and docosahexanoic (DHA), are also essential for normal brain function. Some researchers believe that individuals with ADHD may have difficulty converting EFAs to PUFAs and may be deficient in both of these substances. In a recent study, researchers reported the following findings in hyperactive boys compared to boys of the same age who were not hyperactive:

- Lower blood levels of PUFAs and omega-3 fatty acids
- More allergies and other health problems associated with EFA deficiencies
- Less likelihood of having been breastfed (breast milk contains PUFAs)

Another study found that boys with lower levels of omega-3 fatty acids had more learning and behavioral problems (such as temper tantrums and sleep disturbances) than boys with normal omega-3 fatty acid levels. Despite the accumulation of evidence suggesting a link between PUFA deficiency and ADHD, however, further studies are necessary before EFA supplementation can be recommended for children with ADHD.

### Herbs

One or more of the following calming herbs may be recommended for people with ADHD:

- Roman chamomile (Chamaemelum nobile)
- Kava kava (Piper methysticum)
- Valerian (Valerian officinalis)
- Lemon balm (Melissa officinalis)
- Passionflower (Passiflora incarnata)

Other herbs commonly contained in botanical remedies for ADHD include:

- Pycnogenol: a bioflavonoid antioxidant extracted from pine bark (Pinus)
- Gingko (Gingko biloba): this herb has been used clinically in Europe for circulatory and memory disorders.

• American ginseng (Panar quinquefolium) and gingko: One recent study suggests that gingko in combination with ginseng may improve symptoms of ADHD.

Massage and Physical Therapy

Relaxation and massage techniques have been shown to reduce anxiety and activity levels in children and adolescents with a variety of psychiatric illnesses. In one study of 28 teenage boys with ADHD, those who received 15 minutes of massage for 10 consecutive school days demonstrated significant improvement in measures of behavior and concentration compared to those who were guided in progressive muscle relaxation for the same duration of time.

# Homeopathy

The homeopathic remedies found to be most effective included:

- Stramonium
- Cina
- Hyoscyamus niger

# Mind/Body Medicine

Mind/body techniques such hypnotherapy, progressive relaxation, and biofeedback are particularly well suited to children and adolescents. Children tend to readily accept hypnotic suggestion and the visual process of biofeedback works well for children of this generation because many are accustomed to computerized graphics. Through these techniques, children are often able to learn coping skills that will stay with them for the rest of their lives. These treatments allow children to gain a sense of control and mastery, increase self-esteen. and decrease stress.

Many researchers believe that hyperactive behavior in children results from excessive slow-wave (or theta) activity in certain regions of the brain. In EEG biofeedback, of neurofeedback, an individual is provided with information regarding his or her brain activity. The subject is then trained to suppress slow wave activities enhancing faster brain waves, over a period of usually 40 or more sessions. The belief is that these children can be trained to consciously modify and permanently change this underlying abnormal electrical brain activity associated with ADHD. A larger, more recent study found that a combination

of 40 behavioral treatments (neurofeedback and metacognitive strategies, a technique designed to help individuals consciously monitor how they learn and remember significantly improved ADHD symptoms, academic performance, and IO scores among children and adults with ADHD. The combined treatment also dramatically reduced the need for medications; 30% of the participants were taking stimulant medication at the beginning of the study compared to only 6% at the end of the study. To be most effective for ADHD. however, these mind/body techniques should be incorporated into an overall comprehensive treatment plan that is tailored to the particular individual.

# **Traditional Chinese Medicine** Oi Gong

published studies have Although no evaluated qi gong as a treatment for ADHD, preliminary evidence from unpublished research suggests that weekly qi gong breathing techniques may improve attention and reduce disruptive behaviors in schoolage children.

# **Other Considerations Pregnancy**

To prevent ADHD in their unborn children, pregnant women should obtain high quality care, abstain prenatal medical cigarette, alcohol, and drug use, and should toxic exposure substances. avoid to including lead.

# **Prognosis and Complications**

As many as half of all children with ADHD who receive appropriate treatment learn to control symptoms and function well in adulthood, while the remaining continue to of inattention and exhibit symptoms impulsivity throughout life. As many as 50% to 80% of those who do not seek treatment for ADHD may demonstrate delinquent and antisocial behavior into adulthood. Research suggests that children receive sustained comprehensive treatment (such as medication, behavioral therapy, and biofeedback) are less likely to have behavioral problems in adolescence. In most cases, ADHD can be effectively managed throughout life, particularly when multiple treatment strategies are combined.

# 18. Benign prostate hyperplasia; Prostate Enlargement

Benign prostatic hyperplasia (BPH), a noncancerous growth of the prostate difficult, urination gland. makes uncomfortable and usually develops in men around age 50. At age 60, most men have some degree of BPH. At age 80, men have an 80 percent chance of experiencing urination problems caused by BPH. BPH is NOT cancer and it does NOT put at increased risk for developing prostate cancer.

# Signs and Symptoms

- The need to urinate frequently
- Inability to sleep through the night without getting up to urinate
- Difficulty starting urine stream or complete inability to urinate
- Decreased strength and force of the urine stream
- Dribbling after urination ends
- Blood in the urine (BPH can cause small blood vessels to burst)

### Causes

Nobody knows the basic cause of BPH. Testosterone or dihydrotestosterone may cause the prostate to keep growing.

## Diagnosis

Examine prostate gland directly by putting a gloved finger in rectum. Urinate into a device that measures the flow of urine. Intravenous pyelography and cystoscopy can be done

### **Treatment Approach**

It is important to have regular check-ups to monitor the progression of symptoms. There are lots of ways to successfully treat BPH, including some simple lifestyle changes and some very good herbal remedies and medications, if symptoms are mild. If the symptoms are severe enough, there are also several types of surgery to correct the condition.

### Lifestyle

- Urinate when patient first gets the urge.
- Go to the bathroom frequently even if you don't feel a need to urinate.

- Avoid alcohol and caffeine, especially after dinner. Try not to drink within 2 hours before you go to bed.
- Spread out fluid intake throughout the day – avoid drinking large amounts of fluid at one time.
- Decongestants and antihistamines can worsen BPH symptoms.
- Exercise regularly.
- Learn and perform Kegel exercises to strengthen your pelvic floor.
  - Reduce stress.

### Medications

- 5-Alpha-reductase-inhibitors
   Finasteride and dutasteride lowers levels of hormones produced by the prostate, reduces the size of the prostate gland, increases urine flow rate, and decreases symptoms of BPH and may take 3 to 6 months and the side effects include decreased sex drive and impotence.
- Alpha-adregenic-receptor-Blockers (like doxazosin, prazosin, tamsulosin, and terazosin) are a class of medications also used to treat high blood pressure. These medications relax the muscles of the bladder neck, allowing easier urination.
- Antibiotics may be prescribed to treat chronic prostatitis (inflammation of the prostate), which may accompany BPH.
- Surgery and Other Procedures
   Prostate surgery may be recommended if there is
  - Incontinence
  - Recurrent blood in the urine
  - Urinary retention
  - Recurrent urinary tract infections
  - TURP: Transurethral resection of the prostate (TURP) is the most common surgical treatment for BPH. Inserting a scope through the penis and removing the prostate piece by piece perform the TURP.
  - TUIP: Transurethral incision of the prostate (TUIP) is similar to TURP, but is usually performed in men who have a relatively small prostate. This procedure is usually performed as an outpatient without

- need for a hospital stay. Like the TURP, a scope is inserted through the penis until the prostate is reached. Then, rather than removal of the prostate, a small incision is made in the prostatic tissue to enlarge the opening of the urethra and bladder outlet.
- Open Prostatectomy: An open prostatectomy is usually performed using general or spinal anesthesia. An incision is made through the abdomen or perineal area (i.e., through the pelvic floor, including the region from the scrotum to the anus). Then, the prostate is removed.

Possible complications include impotence, urinary incontinence, retrograde ejaculation, infertility, and urethral stricture (narrowing). The effectiveness of other treatments, such as hyperthermia, laser therapy, and prostatic stents are under study.

**Nutrition and Dietary Supplements** 

Plant based estrogens (called isoflavones or flavonoids) found in soy and other foods like legumes, tea, apples and onions may help prevent or treat the symptoms of BPH. Eating too much fat may increase your chances of developing BPH.

#### Herbs

Saw palmetto (Serenoa repens)— extracts of saw palmetto berries that has been standardized to contain 85% to 95% fatty acids and sterols

Stinging nettle root (*Urtica dioica*) — the root of the stinging nettle, in combination with saw palmetto, may be an effective treatment for BPH,

Pumpkin seed extract (Curcurbita pepo)especially in combination with saw palmetto extract may improve urinary flow and decrease frequency of urination.

African plum extract (Pygeum africanum)— may help diminish nighttime urination

Red clover (*Trifolium pretense*)— reduces enlargement of non-cancerous prostate. Prognosis and Complications

- Sudden inability to urinate
- Urinary tract infections
- Urinary stones
- Damage to the kidneys

Even after surgical treatment, a recurrence of BPH may develop over time.

# 19.Bone cancer

Bone cancers are rare forms of cancer that can affect any bone in the body. Two types of bone cancer are multiple myeloma and bone sarcomas. Bone cancers can also happen when tumors that start in other organs, such as breasts, lung, and prostate, metastasize to the bone. Multiple myeloma is the most common type of bone cancer. The two most common bone sarcomas are osteosarcoma, which develops in new tissue in growing bones, and chondrosarcoma, which develops cartilage. Osteosarcoma tends to occur more frequently in children and adolescents, while chondrosarcoma occurs more often in adults.

# Signs and Symptoms

- Pain
- Swelling or tenderness of the joints
- Fractures
- Fatigue, fever, weight loss, anemia

### Who's Most At Risk?

People with the following conditions may be at risk for developing multiple myeloma.

- Radiation exposure
- Exposure to petroleum products, benzene, herbicides, insecticides
- Genetic factors
- Over 68 years of age
- Blacks twice as often as whites

People with the following conditions may be at risk for developing osteosarcoma.

- Benign tumors and other bone diseases
- Radiation exposure
- Genetic factors
- Children, adolescents
- Males more than females

Risk for developing chondrosarcoma is higher between the ages of 40 and 60.

# What is to be done

Take family medical history, a blood test to measure the level of alkaline phosphatase enzyme that increases when a tumor causes production of abnormal bone tissue. X rays and other imaging procedures can show the location, size, and shape of a bone tumor. A biopsy will reveal whether cancer is present.

# **Treatment Options Treatment Plan**

The treatment plan depends on the type, size, location, and stage of the cancer, as well as the patient's age and general health.

### **Drug Therapies**

- For multiple myeloma: chemotherapy drugs, radiation treatment, medication for pain relief
- For osteosarcoma: cytotoxic drugs

## Surgical and Other Procedures

With multiple myeloma, a bone marrow transplant is sometimes performed. With bone sarcomas, surgery is often the main treatment. In most cases, chemotherapy has made limb-sparing surgery possible and amputation unnecessary.

# Complementary and Alternative Therapies

### Nutrition

Eat organically-raised foods and foods that support detoxification, immunity, and are high in antioxidants: beets, carrots, artichokes, yams, onions, garlic, yellow and orange vegetables, shiitake mushrooms, sea vegetables, green tea, filtered water, dark leafy greens, and whole grains. Avoid refined foods, sugar, alcohol, caffeine, and saturated fats (animal products). Eliminate organ meats and processed meats.

Potentially beneficial nutrient supplements include the following.

- Vitamin C (250 to 500 mg two times per day), vitamin E (400 IU two times per day), beta carotene (50,000 IU once or twice a day), coenzyme Q10 (100 mg three times per day), and zinc (30 mg per day). Coenzyme Q10 and L-carnitine (600 mg three times per day) may protect the heart from the effects of chemotherapy.
- Selenium (200 mcg twice per day) and glutathione (500 mg twice per day) may minimize the side effects of chemotherapy.
- Magnesium (200 mg two to three times per day), vitamin D (400 IU per day), vitamin K (5 mg per day),

and boron (3 to 5 mg per day) can help normal bone growth.

Bromelain (250 to 500 mg between meals) may enhance chemotherapy.

Glutamine (3 to 10 g per day) can be helpful after a bone marrow transplant.

N-acetylcysteine (200 mg three times a day) may minimize the side effects of chemotherapy.

### Herbs

- Turmeric (Curcuma longa): 500 mg four times a day may enhance certain chemotherapies.
- Ginkgo (Ginkgo biloba): 120 mg standardized extract twice a day may reduce toxic effects of certain chemotherapies.

Include one or more of the following formulas to support the immune system.

- Scudder's Alterative Compound: Combine equal parts of corydalis tubers (Corydalis yanhusuo), black alder (Alnus serrulata). tag mayapple root (Podophyllum peltatum), figwort (Scrophularia nodosa), and yellowdock (Rumex crispus). Take 30 to 40 drops tincture three to four times per day for six months
- Herbal mixes containing burdock root (Arctium lappa), sheep sorrel (Rumex acetosella), slippery elm (Ulmus fulva), turkey rhubarb (Rheum palmatum), and other herbs: for brand name products, follow dosing instructions on the product labeling
- Combine equal parts of coneflower (Echinacea angustifolia); poke root (Phytolacca americana), red clover (Trifolium pratense), plantain (Plantago lanceolata), gotu kola (Centella asiatica), and yellowdock (Rumex crispus). Take 30 to 60 drops tincture three times per day. or drink three to four cups tea daily for up to six weeks at a time
  - · Combine equal parts of astragalus (Astragalus membranaceus). schizandra berry (Schizandra

licorice chinensis). root (Glycyrrhiza glabra), lomatium root dissectum), barberry (Berberis vulgaris), and queen's delight (Stillingia sylvatica). Take 30 drops tincture twice a day for four to six months

# Homeopathy

- Arnica Montana for a bruised sensation and restlessness
- Bryonia for fractures With stitching pains that are worse with the slightest movement
- Eupatorium for excruciating aching bone pain that worsens with motion and is often accompanied by stiffness and chills
- Symphytum for fractures that heal poorly and are accompanied by persistent pain

# Acupuncture

It can be a valuable therapy for cancerrelated symptoms (particularly nausea and accompanies vomiting often that chemotherapy treatment). and help reduce pain and shortness of breath. Acupressure has also proved useful in controlling breathlessness. In many cases of cancerrelated symptoms, a qi deficiency is usually detected in the spleen or kidney meridians.

### Chiropractic

They use this procedure over areas that are free of bone cancer in an attempt to relieve pain associated with the condition.

**Prognosis/Possible Complications** 

With multiple myeloma, patients generally five live for 15 months to Complications may include heart attack lung disease, diabetes, and stroke. With bone sarcomas, 60 to 70 percent of patients experience long-term survival. Potential complications include those arising from surgery and possible spread of the cancer 10 the lungs.

Follow Up

Regularly check for complications to make sure the cancer has not returned.

# 20.Brain tumour; Cancer, Brain

Malignant brain tumors usually grow rapidly, crowding and invading tissue. Primary brain tumors are cancers that arise in the brain and affect the central nervous system (CNS). Secondary brain tumors, which are 10 times more common, are cancers that originated elsewhere in the body and have metastasized (spread) to the brain.

### Signs and Symptoms

- Headaches that often are worse in the morning
- Seizures (convulsions)
- Nausea or vomiting
- Weakness or loss of feeling in the arms or legs
- Stumbling or lack of coordination when walking
- Abnormal eye movements changes in vision
- Drowsiness
- Changes in personality or memory
- Changes in speech

### Who's Most At Risk?

- Radiation exposure
- 0 Increased age
- Exposure to pesticides, herbicides, fertilizer
- Certain occupations, such as lead, petroleum, plastic, rubber, textile workers, as well as aircraft and vehicle operators
- Exposure to electromagnetic fields
- Certain viruses, especially Epstein-Barr virus
- People who have had transplants and individuals with AIDS

# What is to be done

Perform a complete physical and neurologic exam. This includes checks for alertness, muscle strength, coordination, reflexes, and response to pain, and an eye exam to look for swelling caused by a tumor pressing on the nerve that connects the eye and the brain, computed tomography (CT) scan and/or magnetic resonance imaging (MRI). Additional tests may include skull X ray, brain scan, angiogram or arteriogram, and a myelogram (X ray of the spine, using dye).A neurosurgeon, medical oncologist, radiation oncologist, nurse, dietitian, social worker, physical therapist, occupational therapist, and speech therapist are involved

### **Treatment Options Treatment Plan**

Treatment for a brain tumor depends on the type, location, and size of the tumor, as well as the person's age and general health. Treatment generally involves surgery, radiation therapy, and/or chemotherapy.

### **Drug Therapies**

- Steroids, to relieve swelling
- Anticonvulsants, to prevent control seizures
- Radiation therapy, to destroy tumor tissue that cannot be removed with surgery or to kill cancer cells that may remain after surgery, or when surgery is not possible
- Chemotherapy, to kill cancer cells

### Surgical and Other Procedures

Surgery is the most common treatment. To remove a brain tumor, a neurosurgeon performs a craniotomy, which involves making an opening in the skull. If the tumor cannot be at least partially removed, the surgeon may do only a biopsy, so that a pathologist can examine it under microscope to determine the type of cancer cells. This information helps determine other forms of treatment. Another procedure sometimes used is insertion of a shunt to drain cerebrospinal fluid. A shunt is a long, thin tube placed in the brain and then threaded under the skin to another part of the body, usually the abdomen. It works like a drainpipe, allowing excess fluid to be carried away from the brain and absorbed in the abdomen.

# Complementary and Alternative **Therapies**

### Nutrition

Advised to eat only organically-raised foods. To include sea vegetables, garlic, onions, green tea, whole grains, fresh vegetables (especially dark green, yellow, and orange vegetables), legumes, protein, and anti-inflammatory oils (i.e., nuts, seeds, and cold-water fish) in diet. To eliminate processed meats, refined foods, additives, sugar, artificial foods, alcohol, caffeine, saturated fats, and nitrosamines

Potentially beneficial nutrient supplements include the following.

Vitamin E (400 to 800 IU per day), vitamin C (250 to 500 mg twice per day), selenium (200 mcg twice per day), coenzyme Q10 (100 mg three times per day), and vitamin A (25,000 IU twice per day)

- Glutathione 500 mg twice per day
- Melatonin (20 mg four times per day)
- Methionine (100 mg three times a day), zinc (20 mg per day), vitamin
   C (250 to 500 mg twice per day), and selenium
- Shark and bovine cartilage (controversial)

### Herbs

- Garlic (Allium sativum): Drink ginger (Zingiber officinale) and garlic tea, two to three cups daily.
- Hawthorn (Crataegus monogyna):
  200 mg two times per day and
  bilberry (Vaccinium myrtillus) 120
  mg two times per day
- Commercial Hoxsey-like formulas or trifolium compounds: 60 drops two to three times per day to tid for six months or longer
- Herbal mixes containing burdock root (Arctium lappa), sheep sorrel (Rumex acetosella), slippery elm (Ulmus fulva), turkey rhubarb (Rheum palmatum), and other herbs
- Mistletoe (*Viscum album*): 60 drops tincture three times per day, or 250 mg capsules three times per day

• Combine essential oils of bergamol (Citrus bergamia), chamomile (Matricaria recutita), and lavender (Lavendula angustifolia) in aromatherapy applications. Place several drops in a warm bath, or four to six drops in 1 tbs. of vegetable oil for massage.

## Homeopathy

Homeopathy may help relieve symptoms and strengthen overall well-being.

### Acupuncture

Acupressure has also proved useful in controlling breathlessness after the completion of conventional medical cancer therapy. In many cases of cancer-related symptoms, a qi deficiency is usually detected in the spleen or kidney meridians.

## **Prognosis/Possible Complications**

Brain cancer has significant emotional and psychological effects. Patients who receive radiation therapy to large areas of the brain or certain anticancer drugs may have a higher risk of developing leukemia or a second tumor at a later time. Radiation that affects the eyes may lead to the later development of cataracts.

## Follow Up

Regular follow-up is very important after treatment, to make sure the tumor has not returned. Checkups usually include physical and neurologic exams and occasional CT scans or MRIs.

# 21.Breast cancer; Cancer, Breast

Breast cancer occurs when there is a malignant tumor inside the breast. Second to lung cancer may be as the leading cause of death by cancer among women. Ninety percent of breast cancers are detected by women themselves, often through breast self-examination (BSE).

### Signs and Symptoms

- A lump or thickening in or near the breast or in the underarm area
- A change in the size or shape of the breast
- Nipple discharge or tenderness, or the nipple pulled back (inverted) into the breast

- Ridges or pitting of the breast (the skin looks like the skin of an orange)
- A change in the way the skin of the breast, areola, or nipple looks of feels (for example, warm, swollen, red, or scaly)

# What Causes It?

While the cause of breast cancer is not known, the disease is hormone-dependent. Women whose ovaries do not function and who never receive hormone replacement therapy do not develop breast cancer.

# Who's Most At Risk?

- Women 99%
- Increasing age
  - · History of cancer in one breast

- History of benign breast disease
- Never giving birth or first pregnancy after 30
- Family history (first-degree relative) of breast cancer (significant for premenopausal women)
- Early onset of menstruation and late menopause
- Possibly, long-term oral contraceptive use
- High doses of ionizing radiation before age 35
- History of cancer of the colon, thyroid, endometrium, or ovary
- Diet high in animal fat, excessive alcohol consumption, and, possibly, obesity
- Alterations in certain genes
- Breast implants

### What is to be done

Breast exam and laboratory tests, including a study of breast tissue and genetic studies Imaging techniques such as mammography, ultrasound, magnetic resonance imaging (MRI), are required

# **Treatment Options**

#### Prevention

Early detection is important. Monthly breast self-examination and annual gynecologic examinations play a large role in early detection. Nutrition may play a role in prevention.

### Treatment Plan

Treatment options depend on the size and location of the tumor, results of lab tests, and the stage, or extent, of the disease, along with the patient's age and menopausal status, general health, and breast size.

# **Drug Therapies**

- Radiation therapy— the use of high energy rays to kill cancer cells and prevent them from growing
- Chemotherapy—the use of drugs to kill cancer cells
- Hormonal therapy, which keeps cancer cells from getting the hormones they need to grow
- Antitumor antibiotics
- Antiestrogens, such as tamoxifen, which block the action of estrogen on breast tissue
- Monoclonal antibodies to block the protein receptor that is produced in

- large numbers in women with breast cancer
- High-dose progestogens (steroid hormones)

## Surgical and Other Procedures

Surgery is the most common treatment for breast cancer. The choice of surgeries includes the following.

- Mastectomy—removal of the breast or as much of the breast tissue as possible; can be followed by breast reconstruction
- Lumpectomy—removal of the tumor and a small amount of tissue around it, usually followed by radiation therapy
  - Segmental, or partial, mastectomy—removal of the tumor and a small amount of tissue around it, as well as the lining of the chest muscles below the tumor and some of the lymph nodes under the arm. It is usually followed by radiation therapy.

# Complementary and Alternative Therapies

Psychotherapy and support groups may help improve quality of life and survival.

#### Nutrition

- Eliminate non-organic poultry, dairy, red meat, sugar, white flour and refined foods, coffee, tea, chocolate, and colas.
- Eat cruciferous vegetables (broccoli, cabbage, cauliflower).
- Eat only organically raised foods.
- Include liver foods such as beets, carrots, yams, garlic, dark leafy greens, lemons, and apples.
- · Follow a high-fiber diet.
- · Use soy.

Potentially beneficial nutrient supplements include the following.

- Coenzyme Q10 (120 mg three times a day)
- Calcium d-glucarate (500 to 1,000 mg three times a day)
- Vitamin A (25,000 IU a day), vitamin E (800 IU a day), and vitamin C (250 to 500 mg twice per day) to decrease side effects of chemotherapy and radiation

- Selenium (200 to 400 mcg a day) to decrease side effects of chemotherapy and radiation
  - Bromelain (500 mg two times a day between meals)
  - Melatonin (10 to 50 mg a day)

### Herbs

The use of certain herbal remedies may offer relief from symptoms. Try the following: a combination of black cohosh (Cimicifuga racemosa), red clover (Trifolium pratense), and alfalfa (Medicago sativa) as a base (1 to 3 g); add two to three of the following in equal parts, 30 to 60 drops two to three times daily:

- With anxiety: passionflower (Passiflora incarnata), kava kava (Piper methysticum)
- With lymph node involvement: poke root (*Phytolacca americana*), red root (*Ceanothus americanus*); maximum dose of pokeroot is 0.4 ml a day.
- With nausea: ginger root (Zingiber officinale), fennel seed (Foeniculum vulgare)
  - With exhaustion: oatstraw (Avena sativa), skullcap (Scutellaria lateriflora)

# Homeopathy

- Arsenicum for anxiety and nausea, with restlessness and burning pains
- Ipecac for nausea unrelieved by vomiting
- Nux vomica for sharp abdominal pains with anger and collapse

Acute dose is three to five pellets of  $12X_{t_0}$  30C every one to four hours until symptoms are relieved.

## Acupuncture

Acupuncture may help eliminate pain and hot flashes caused by tamoxifen (a breast cancer medication). In many cases of cancer-related symptoms, a qi deficiency is usually detected in the spleen or kidney meridians.

# Prognosis/Possible Complications

- Restricted shoulder movement
- Increase in size of operative scar
- Inflammation of connective tissue in the affected arm
- Malignant tumor of the lymphatic vessels in the affected arm
- Accumulation of fluid in the breast; swelling of tissue in the arm
- Discoloration of the skin from radiation, or a red spot
- Inflammation of the lung from radiation
- Death of the fat cells underlying the breast tissue
  - Recurrence of the disease

The prognosis for breast cancer patients depends primarily on the stage, or extent, of the disease at the time of the initial diagnosis.

# Follow Up

Breast cancer patients should be followed every three months for eighteen months 10 four years, then every six months.

# 22.Bronchitis; Respiratory Infection

Bronchitis means inflammation of the air passages to the lungs. Bronchitis can be acute or chronic. Acute bronchitis is usually due to a viral infection that begins in the nose or sinuses and spreads to the airways. To be considered chronic, patient must have a cough productive of sputum at least three months out of the year. Chronic bronchitis occurs most often in smokers and, together with emphysema, is known as chronic obstructive pulmonary disease (COPD).

# Signs and Symptoms Acute bronchitis:

Cough that produces mucus

- Burning sensation in the chest
- Wheezing
- Sore throat
- Fever
- Fatigue

# Chronic bronchitis:

- Chronic cough that produces excessive amounts of mucus
- Wheezing, shortness of breath
- Blue-tinged lips
- · Ankle, feet, and leg swelling

### Causes

Acute bronchitis is usually caused by <sup>3</sup> virus, but can also be caused by bacteria.

Generally, acute bronchitis is passed from person to person. The main causes of chronic bronchitis are eigarette smoking and prolonged exposure to air pollution or other irritants such as dust and grain.

### Diagnosis

Examine of the respiratory system, throat, and blood and culture of the secretions from lungs. A chest x-ray might be ordered.

# **Preventive Care**

The best way to avoid chronic bronchitis is to not smoke and to stay away from air pollutants. To avoid infection that may lead to either acute bronchitis or exacerbation of chronic bronchitis, get an annual flu vaccine and pneumococcal vaccine once in lifetime.

# **Treatment Approach**

Acute bronchitis from a virus generally clears on its own within 7 to 10 days. Using a humidifier, taking a cough medicine that contains an expectorant and drinking plenty of fluids can help relieve symptoms. If a bacterial infection is suspected or confirmed, antibiotics may help treat bronchitis.

### Lifestyle

- DO NOT smoke.
- Use a humidifier or steam in the bathroom.
- Drink plenty of fluids.
- Rest while you have an active infection.
- Home oxygen therapy will be prescribed.

### Medications

- Bronchodilators (such as albuterol)
   this is an inhaler that can help open up your airways
- Corticosteroids inhaled or oral to reduce mucus and inflammation
- Cough suppressant or expectorant
- Antibiotics for bacterial infection
- Erdosteine is beneficial in patients with stable hypersecretary chronic bronchitis.

# **Nutrition and Dietary Supplements**

Intake of dairy, which may increase mucus production. Also eliminate eggs, milk, nuts, food coloring, preservatives, and additives. Add onions and garlic.

# N-Acetyl-Cysteine (NAC)

NAC may help dissolve mucus and improve symptoms

#### Zinc

Zinc supplementation enhances immune system activity and protects against a range of infections including colds and upper respiratory infections. Other supplements to consider may help prevent from catching an infection or may help relieve symptoms from bronchitis:

- Bromelain
- Lactobacillus
- Quercetin
- Vitamin C

### Herbs

### Barberry (Berberis vulgaris)

This herb contains substances that help fight infection and improve immune function.

# Eucalyptus (Eucalyptus globules)

Eucalyptus oil helps loosen phlegm, so many herbal practitioners recommend inhaling eucalyptus vapors to help treat bronchitis, coughs, and the flu.

# Peppermint (Mentha x piperita)

Peppermint and its main active agent, menthol, are effective decongestants. Because menthol thins mucus, it is also a good expectorant, meaning that it helps loosen and breaks up coughs with phlegm. It is soothing and calming for pharyngitis and dry coughs as well.

## Slippery elm (Ulmus fulva)

Slippery elm has received recognition from the U.S. Food and Drug Administration (FDA) as a safe and effective option for sore throat (pharyngitis) and respiratory symptoms including cough.

# Stinging nettle (Urtica dioica)

Active compounds in stinging nettle may act as an expectorant and may have anti-viral properties.

### Other

- Astragalus (Astragals membranaceus)
- Echinacea (Echinacea angustifolia/Echinacea pallida/Echinacea purpurea)
- Garlic (Allium sativum)
- Ginger (Zingiber officinale)
- Ivy leaves (Hedera helix L.)
- Jamaica dogwood (Piscidia erythrina/Piscidia piscipula) .
- Licorice (Glycyrrhiza glabra) –
  Note: this herb should NOT be used
  if you have high blood pressure

- Linden (Tilia cordata and Tilia platypus)
- Lobelia (Lobelia inflata), also known as Indian tobacco – Note: this herb, which is potentially toxic, should NOT be used without specific instruction.
  - Marshmallow (Althea officinalis)
  - Red clover (Trifolium pratense)
  - Saw palmetto (Serenoa repens/Sabal serrulata)

## Homeopathy

- Aconitum for early stages of bronchitis or other respiratory disorders; this remedy is most appropriate for people with a hoarse, dry cough who complain of dry mouth, thirst, restlessness, and being awakened by their own coughing; symptoms tend to worsen in cold air or when when lying on one's side
- Antimonium tartaricum for wet, rattling cough (although the cough is usually too weak to bring up mucus material from the lungs) that is accompanied by extreme fatigue and difficulty breathing; symptoms usually worsen when lying on one's back; this remedy is particularly good for children and the elderly and is generally used during the later stages of bronchitis
  - Bryonia for dry, painful cough that tends to worsen with movement and deep inhalation; this remedy is most appropriate for individuals who are generally thirsty, chilly, and irritable
  - Hepar sulphuricum for later stages
     of bronchitis, accompanied by
     wheezing, scant mucus production,
     and coughing that occurs when any
     part of the body gets cold

- Ipecacuanha for the earliest stages of bronchitis accompanied by a deep, wet cough, nausea and vomiting; this remedy is commonly prescribed for infants
- Phosphorus for several different types of cough but usually a dry, harsh cough accompanied by a persistent tickle in the chest and significant chest pain; this remedy is most appropriate for individuals who are often worn out and exhausted, tend to be anxious and fear death, and require a lot of reassurance

# Massage and Physical Therapy Aromatherapy

Running a humidifier with an essential oil such as cedarwoord, bergamot, eucalyptus, myrrh, sweet fennel, jasmine, lavender, tea tree, or marjoram at night may help thin mucus and ease cough.

# Acupuncture

Needling treatment for bronchitis tends to focus on the lung and spleen meridians. Acupuncturists usually perform other treatments as well to clear the blockage of qi in the chest area. These treatments may include specialized massage, moxibustion (a technique in which the herb mugwort is burned over specific acupuncture points), breathing exercises, lifestyle counseling, and herbal remedies.

# **Prognosis and Complications**

For acute bronchitis, symptoms usually resolve within 7 to 10 days if there is underlying lung disorder. However, a dry, hacking cough can linger for a number of months. The chance for recovery is poor for advanced chronic bronchitis. Early recognition and treatment, combined with smoking cessation, significantly improve the chance of a good outcome.

# 23. Bulimia nervosa; Eating Disorders, Bulimia

Bulimia nervosa is an eating disorder characterized by periods of binge eating. In some cases, the person will compensate for this overeating by forcing vomiting; misusing laxatives, diuretics, or enemas; fasting; or excessive exercising.

People with bulimia cannot control their eating and have a paralyzing fear of becoming fat. Bulimia is associated with depression and other psychiatric disorders and shares symptoms with anorexia nervosa, another major eating disorder. Because

many individuals with bulimia maintain a normal or above-normal body weight, they are able to keep their condition a secret for years.

# Signs and Symptoms

Bulimia is often accompanied by the following signs and symptoms:

- Binge eating of high-carbohydrate foods, usually in secrecy
- Loss of control over eating, with guilt and shame
- Body weight that goes up and down
- Constipation, diarrhea, nausea, gas, abdominal pain
- Dehydration
- Blood-tinged vomit
- Irregular menstruation or cessation of menstrual periods
- Eroded tooth enamel
- Bad breath
- Throat irritation and inflammation
- Calluses on hands from forcing the body to vomit
- Stealing, especially food
- Depression
- Substance abuse, especially alcohol

#### What Causes It?

There are several different theories about what is involved in the development of bulimia. Bulimia may have a hereditary component; in addition, some experts believe that a family environment with an overemphasis on achievement may be another contributing factor. The role of sexual abuse in the development of bulimia is controversial. Other psychological and environmental factors may be involved; these include mood disorders and substance abuse in families of people with bulimia. Individuals may bulimia with self-mutilation, experience depression, substance abuse, and obsessive-compulsive appear behavior. Cultural pressures to the disorder, slender contribute to particularly among dancers and athletes.

### Who's Most At Risk?

- White, middle-class women (primarily adolescents and college students)
- People with a family history of mood disorders and substance abuse
- Individuals with low self-esteem

### What is to be done?

Often, people with bulimia are ashamed of their condition and do not seek help for many years, by which time their behaviors are deeply ingrained and harder to change.. He or she will check for physical signs such as eroded tooth enamel and enlargement of the salivary glands, as well as signs of depression, possibly including marks from self-mutilation. Laboratory tests can reveal chemical changes caused by bingeing and purging, and psychological tests may point to obsessive-compulsive or antisocial behaviors.

# Treatment Options Treatment Plan

The most successful treatment is a combination of interpersonal therapy, family therapy, patient education, and medication.

# **Drug Therapies**

- Fluoxetine, a selective serotonin reuptake inhibitor (SSRI) and currently the only FDA-approved drug for bulimia. May also be prescribed other antidepressants, such as other SSRIs, tricyclic antidepressants, or monoamine oxidase (MAO) inhibitors.
- Potassium supplementation

# Complementary and Alternative Therapies

Psychotherapy is a cornerstone of bulimia treatment. Using biofeedback may also help you to better manage stress. Other mindbody and stress-reduction techniques, such as yoga, tai chi, and meditation, may help.

#### Nutrition

Nutrition therapy is as important as psychotherapy in treating bulimia. The goals of nutrition therapy are to stabilize blood sugar levels, to make sure getting enough nutrients, and to restore gastrointestinal health.. Nutritional management included information on the effects of bulimia, techniques to avoid binge eating, and advice about making meals and eating. Stress management included analysis of stressful situations; short-term stress management as relaxation, strategies, such encouragement, and self-distraction; and training in planning, problem solving, and communication. Some people with eating disorders are deficient in zinc. Variations in levels of zinc can affect taste, smell, appetite, and response to stress. Zinc deficiency may play a role in eating disorders and altered self-image. Taking supplements may help. multivitamin with minerals to maintain levels of other important nutrients. Bcomplex vitamins may reduce stress and depression. Recommend eating small meals every 3 hours.

### Herbs

To alleviate stress, restore normal digestion and decrease anxiety:

- Licorice root (Glycyrrhiza glabra)
- Skullcap (Scutellaria lateriflora)
- Oatstraw (Avena sativa)
- Passionflower (Passiflora incarnata)
- Lemon balm (Melissa officinalis)

Additional herbs may be considered to treat particular symptoms such as St. John's wort (Hypericum perforatum) for depression.

# Homeopathy

No scientific literature supports the use of homeopathy for bulimia.

### Acupuncture

No scientific literature supports the use of acupuncture for bulimia.

# Massage

Therapeutic massage can be an effective part of a bulimia treatment plan.

Prognosis/Possible Complications

Relapse is common in people with bulimia Complications that can happen from repeated bingeing and purging include problems with the esophagus, stomach heart, lungs, muscles, or pancreas. Suicidal individuals or those with severe symptoms may need to be hospitalized to prevent further complications. Pregnancy may be difficult emotionally for women with bulimia because of the changes in body shape that occur. Poor nutritional health of the mother may also have a negative impact on the unborn child. Women who have stopped menstruating because of bulimia will be unable to become pregnant.

# Follow Up

Since bulimia is usually a long-term disease, the person's weight, exercise habits, and physical and mental health need to be checked periodically by a physician.

# 24.Burns

When the skin is exposed to excessive heat, electricity, or corrosive chemicals, the resulting tissue damage is known as a burn. Burns are generally categorized as follows, according to the severity of tissue damage:

- First-degree burns-affect only the outer layer of the skin (epidermis), causing pain and redness
- Second-degree burns—extend to the layer below the epidermis (the dermis), causing pain, redness, and blisters that may ooze
- Third-degree burns—involve all layers of the skin and may also damage the underlying bones, muscles, and tendons. The burn site appears pale, charred, or leathery and there is generally no sensation in the area because the nerve endings are destroyed.

Skin is a natural barrier to infection, so when it is burned a person loses that protection. Because people who sustain a are very prone to developing infections, treatment involves usually preventing or eliminating infections.

Signs and Symptoms

In general, signs and symptoms of burns differ according to the severity of the burn. Evaluation of the extent of the burn is important as well because it helps to assess the risk for such complications as infection. dehydration, and/or disfigurement.

## Infection

Potential signs of infection include:

- Change in color of the burnt area of surrounding skin
- Purplish discoloration, particularly if swelling is also present
- Change in thickness of the burn (the burn suddenly extends deep into the skin)
  - Greenish discharge or pus • Fever

# Dehydration

Potential signs of dehydration include:

• Thirst

- Lightheadedness or dizziness, particularly when moving from sitting or lying position to standing
- Weakness
- Dry skin
- Urinating less often than usual

### **Burn Patterns**

Burns have typical and atypical patterns—typical patterns result from unintentional burns while atypical patterns may be a sign of physical abuse. Typical burns (from spilling hot liquid, for example) tend to occur in exposed areas such as the arms, face, and neck. Atypical burns may occur in unexposed areas such as the buttocks. Burns involving entire hands and feet are also not typical, neither are third-degree burns involving a very small, focused area

### Causes

Burns are caused by exposure to thermal, electrical, or chemical sources. Thermal burns occur when hot metals, scalding liquids, steam, or flames come in contact with the skin. Exposure to electrical current causes electrical burns, and contact with caustic chemicals causes chemical burns. Prolonged exposure to the sun's ultraviolet rays or to other sources of radiation can also cause burns. The most serious burns are usually caused by scalding hot or flammable liquids, and fires. Exposure to chemicals and electrical currents also cause severe injury and damage to the skin.

### Risk Factors

- Wood stoves, exposed heating sources or electrical cords
- Unsafe storage of flammable or caustic materials
- Careless smoking
- Child abuse
- Hot water heater set above 130°F
- Heated foods and containers
- Sun overexposure

# **Preventive Care**

The following actions have been shown to lower the incidence of burns:

- Installing smoke detectors
- Educating children about fire and burn prevention in schools
- Abstaining from smoking and heavy alcohol use
- Wearing flame-retardant clothes (particularly children)

- Planning emergency exit routes in the home, school, and workplace
- Fire drills

The following steps may help reduce the severity of a burn once it occurs:

- Administering first aid immediately
- Obtaining prompt medical attention
- If hospitalization is necessary, being treated by a dedicated burn unit with staff specially trained in burn care

### Diagnosis

When diagnosing a burn, evaluate the depth and extent of the damage, the degree of pain, the amount of swelling, and signs of infection. They will classify the burn based on the depth and extent of the injury Burns that cover a significant portion of the body, burns associated with smoke inhalation, burns resulting from electrical injuries, and burns associated with suspected physical abuse are treated as emergencies and require hospitalization. In the emergency room, all wounds are wrapped with sterile towels and patients receive oxygen and fluids. Patients are also evaluated for associated injuries. Also conduct a biopsy to determine whether infection is present in the wound.

### Treatment Approach

Appropriate treatment for burns depends on the extent of the tissue damage, the cause of the burn, and whether or not infection is present. All burns (with the exception of mild, first-degree burns) require immediate medical attention because of the risk of infection, dehydration, and other potentially serious complications. The following steps may be taken in an emergency situation:

### First-degree burns:

- Run cool water on burned area for 5 to 10 minutes or cover the area with a cool compress
- Take ibuprofen or acetaminophen to relieve pain and swelling

### Second-degree burns:

- Do not break blisters
- Do not remove clothing that is stuck to the skin
- Run cool water on burned area for 5
  to 10 minutes or cover the area with
  a cool compress then carefully
  remove clothing
- Elevate burned area above the heart

- Take ibuprofen or acetaminophen to relieve pain and swelling
- If not near a medical facility, apply bacitracin ointment or honey on broken blisters to prevent infection

# Third-degree burns:

- Check airway, breathing, circulation
- Do not remove clothing that is stuck to the skin
- Run cool water continuously on burned area
- Elevate burned area above the heart People who have sustained serious burns will be admitted to a hospital where keeping the area clean and removing any dead tissue through a process called debridement are of the utmost importance. Medications will be used to reduce pain and prevent infection. A tetanus shot will be administered if the person has not had one in 5 or more years.Burns are often accompanied by pain and anxiety, even during recovery. A person may also experience emotional distress if a alters his or her appearance. Complementary therapies that may help a person alleviate such pain and anxiety include:
  - Massage therapy
  - Hypnosis
  - Therapeutic touch
  - Acupuncture

Proper nutrition is particularly important during the recovery phase, as certain vitamins and minerals have been shown to promote wound healing and prevent the spread of infection. Many traditional cultures also use herbs to treat burns, although the safety and effectiveness of these remedies are not well understood.

### Medications

- Antimicrobial ointments (such as silver sulfadiazine, mafenide, silver nitrate, and povidone-iodine) are frequently used to lower the occurrence of infection; bacitracin may be used for first-degree burns.
- Antibiotics (such as oxacillin, mezlocillin, and gentamicin) are used if infection is detected at the burn site; antibiotics will probably be used if the risk of developing infection is high (for

example, when the body surface area of the burn is large)

# Surgery and Other Procedures

In the case of severe burns, removal of dead tissue, known as debridement, and skin grafting improves the recovery process Cosmetic surgery may also be necessary to improve both the function and appearance of the burned area.

# **Nutrition and Dietary Supplements**

Burn patients in hospitals are often given diets high in calories and protein to speed recovery. When skin is burned, a substantial percentage of micronutrients, such as copper, selenium, and zinc may be lost. This increases the risk for infection, slows the healing process, prolongs the hospital stay, and even increases the risk of death Although it is unclear which micronutrients are most beneficial for people with burns, many studies suggest that a multivitamin including the following nutrients may aid in the recovery process:

- Vitamin B complex
- Vitamin C
- Vitamin A
- Arginine 0
- Glutamine
- Copper
- Selenium
- Zinc

In addition, vitamin K levels tend to be low following a burn.

## Antioxidants

Oxidative stress is believed to contribute significantly to skin and soft tissue damage incurred from a burn. In addition, levels of several antioxidants are measurably lower in burn victims, including beta-carotene, and vitamins A, C, and E. For this reason. antioxidant therapy using, for example vitamins C and E and carotenoids, is often part of the treatment of burns, particularly soon after the injury takes place. In addition although it is popular during the time of recovery from a burn to use topical vitamin E to try to diminish scar formation

# **Essential Fatty Acids**

Essential fatty acids have been used to reduce inflammation and promote wound healing in burn victims.

# Bromelain

Bromelain, a collection of protein-digesting enzymes found in the stem of pineapple

plants, has been used historically to reduce swelling following soft tissue damage.

### Herbs

# Aloe (Aloe vera)

Aloe has been used for centuries to heal skin lesions and wounds. Aloe contains glycoproteins, protein-carbohydrate compounds that speed the healing process by stopping pain and inflammation, and polysaccharides, a type of carbohydrate that stimulates skin growth and repair.

### Honey

In some traditional medical practices, honey is applied to the skin to prevent infection and heal wounds. Topical applications of honey may heal burns significantly faster than the antimicrobial ointment, silver sulfadiazine.

# Papaya (Carica papaya)

In The Gambia, Africa, papaya is used topically to help remove dead tissue from burn wounds and prevent infection.

# Tea Tree Oil (Melaleuca alternifolia)

In Australia, tea tree oil was used by aborigines and early settlers to treat burns.

### Other Herbs

Each of the following remedies would be applied topically.

- Slippery elm (Ulmus fulva)
- St. John's wort (Hypericum perforatum)
- Roman chamomile (Chamaemelum nobile)
- Walnut leaf (Juglans reglia)
- Gotu kola (Centella asiatica)
- Horsetail (Equisetum arvense)
- Milk thistle (Silybum marianum)
- Stinging nettle (Urtica dioica)

# Acupuncture

# **Electrical Stimulation**

Transcutaneous electrical nerve stimulation (TENS) is a method of applying controlled, low-voltage electrical stimulation to the skin for the purpose of relieving pain. Recent studies have suggested that TENS applied to acupuncture points (called electroacupuncture) on the ear (auricular acupuncture) may provide pain relief for people with burns.

# Massage and Physical Therapy

Massage Therapy

People with burns suffer pain, itching, and anxiety both from the burn itself and during the healing of the wound. Massage may help

ease these symptoms in both the emergencycare and recovery phases. Reported effects included:

- Decreased anxiety
- Decreased pulse rate (a potential sign of improved relaxation and/or diminished pain)
- Decreased levels of cortisol (a hormone that indicates stress in the body)
- Decreased pain
  - Improved mood, including diminished depression and anger

### Physical Therapy

Occupational and physical therapy begin very early for patients who are hospitalized for burns. The techniques used by occupational and physical therapists improve movement and function and reduce scar formation. Rehabilitation with the guidance of occupational and physical therapists may include the practices listed below:

- Body and limb positioning
- Splinting
- Assistance with activities of daily living until normal function and ability are recovered
- Passive (physical therapist moves the patient's limbs) and active exercises
- Assistance with walking

### Homeopathy

- Immersing the burned area in cold water until the pain subsides
- Arnica Montana taken orally immediately following a burn
- Calendula applied to the skin for first-degree burns and sunburns; this remedy is sometimes considered the treatment of choice for children; calendula may also be used in the healing stages of second- and thirddegree burns to stimulate regrowth of skin and to diminish scar formation
- Cantharis for persistent pain, restlessness, and anxiety especially as a result of severe burns; oral and/or topical forms may be recommended; requires a homeopathic doctor's prescription; may be used in children

- Hypericum perforatum used topically if there are sharp, shooting pains with the burn
- Urtica urens taken orally for stinging pains, itching, and swelling of first-degree burns; a cream or gel may also be applied to the skin for first-degree burns and sunburns; this remedy may be used for children
- Causticum taken orally for burning pains with great rawness (as from an open wound) or when there are long-term physical or emotional symptoms after a burn; may be used in children under the direction of a licensed homeopath, often in the case of more severe burns
  - · Phosphorus taken orally for electrical burns, especially if the individual is easily startled and care or standard wound care plus hypnosis with a technique called rapid induction analgesia (RIA). RIA sessions were administered prior wound to excitable

Mind/Body Medicine Hypnosis

Several studies suggest that hypnosis may

reduce pain and anxiety and enhance relaxation in burn patients.

# Therapeutic Touch

Therapeutic touch (TT) is based on the theory that the body, mind, and emotion form a complex energy field...

Other Considerations Prognosis and Complications

- Infection is the most common complication of burns and is the major cause of death in burn victims...
- Compromised immune system
- Functional or cosmetic (reconstructive surgery may be necessary)
- Increased risk of developing cancer at the burn site
- Carbon monoxide poisoning (in the case of a fire)
- Heart attack which may be severe enough to cause the heart to stop

First-degree burns generally heal on their own in 10 to 20 days if no infection develops. In rare cases, firstdegree burns spread more deeply to become second degree (this spread is caused by infection). Third-degree burns often require a skin graft.

# 25.Bursitis

Bursitis is an inflammation of a bursa, a small structure inside every joint that helps to lubricate and cushion it. Usually bursitis occurs in the larger joints, such as the shoulder, hip, knee, or elbow. It can happen once or can recur over time. Without seeing your physician, you usually can't easily tell the difference between bursitis and pain caused by a strain or arthritis.

# Signs and Symptoms

- Pain in the joint that gets worse when you move the joint
- Swelling
- Redness
- Fever and warm joint area (if an infection is present)

# What Causes It?

Typically the bursa becomes irritated of injured when the area is overused with repetitive motion or strenuous activity. may also be caused by a bacterial infection Certain other medical conditions, such gout or rheumatoid arthritis, can also cause bursitis.

# What is to be done?

Identify exactly where the joint hurts and feel the joint for swelling or particular areal of tenderness. Remove some fluid from the bursa with a small needle to check for sign of infection. Do a blood test to check for other medical conditions.

**Treatment Options** 

Sometimes simply resting and elevating the joint can help the area heal. A splint, sling or other device can support the joint and general keep it from moving. Applications of heat or cold may help relieve pain and swelling.

# **Drug Therapies**

- Corticosteroids—injections into the bursa or taken orally help to reduce inflammation; side effects include blurred vision, frequent urination, and increased thirst; may be given with a local anesthetic to reduce pain
- Antibiotics—for bursitis that is infected
  - Acetaminophen, aspirin, and ibuprofen—to reduce pain

# Surgical and Other Procedures

In rare instances, the bursa is surgically removed.

# Complementary and Alternative Therapies

Alternative therapies may be useful in reducing the pain and inflammation of bursitis while supporting healthy connective tissue.

### Nutrition

Include in your diet anti-inflammatory oils such as those found in cold-water fish, nuts, and seeds. The following supplements may help.

- Glucosamine sulfate (500 mg two or three times a day), for connective tissue support
  - Omega-3 oils (1,000 mg two or three times a day), such as flaxseed oil, as an anti-inflammatory agent
  - Vitamin C with flavonoids (250 to 500 mg two times a day), for connective tissue repair
  - Proteolytic enzymes such as bromelain (250 mg twice a day), to reduce inflammation
  - Flavonoids and oral digestive enzymes for inflammation

# Herbs

Herbs that reduce swelling include meadowsweet (Filipendula ulmaria), white willow (Salix alba), Jamaica dogwood (Piscidia piscipula), and turmeric (Curcuma longa). A tincture of one, or a combination of these, may be taken at 15 drops every 15 minutes up to four doses for acute pain relief, or 30 drops four times per day for

- general pain relief. Turmeric increases the effects of bromelain.
- For bursitis with muscle spasm, add valerian (Valeriana officinalis).
- For chronic bursitis, add hawthorn (Crataegus monogyna).

### Homeopathy

- Arnica gel applied topically (to the skin) as directed gives excellent short-term pain relief.
- Arnica for bursitis occuring after an injury to the joint
- Ruta graveolons for rheumatic pains in the joint
- Bellis perennis for injury with a great deal of bruising
- Rhus toxicodendron for pain that gets better with movement
- "Traumeel" injections as an alternative to corticosteroids

### Acupuncture

Acupuncture can be helpful in reducing swelling and inflammation, and especially in relieving pain.

# Chiropractic

Chiropractors commonly treat people with this condition and report that some experience improvements in symptoms, including reduced pain and increased range of motion. Chiropractors are also likely to use other treatments in addition to spine and joint manipulation (such as ice massage and ultrasound therapy) for the treatment of bursitis

### Massage

Should not use massage if your bursitis is caused by an infection. Otherwise, massage (especially myofascial release therapy) can be used for general relaxation and to reduce discomfort from inflammation and from compensating for a sore joint.

### Follow Up

If symptoms are not relieved by treatment., rest the joint to allow the swelling to subside before returning to usual routines. Help prevent bursitis from recurring by avoiding repetitive motions, resting between periods of intense activity, and doing stretching exercises before starting an activity.

# **Special Considerations**

Do not take aspirin, acetaminophen, or ibuprofen for more than a few days unless so directed. Be careful when pregnant.

# 26.Candidiasis; Yeast Infection

Candidiasis is an infection caused by a yeastlike fungus called candida. It can infect the mouth, vagina, skin, stomach, and urinary tract. Approximately 75 percent of women will get candidiasis of the vagina during their lifetime, and 90 percent of all people with HIV/AIDS develop candida infections.

# Signs and Symptoms

- Creamy white patches in the mouth or on the throat
- Painful cracks at the corners of the mouth
- Skin rashes, patches, and blisters found most commonly in the groin, between fingers and toes, and under the breasts
  - Vaginal itching and irritation with a curdlike discharge

### What Causes It?

Normal amounts of candida existing in the mouth, stomach, and vagina do not cause infections. Candidiasis occurs when there is a buildup of candida. This may be caused by taking certain drugs (especially antibiotics), pregnancy, being overweight, bacterial infection, or any of a number of health conditions

# What is to be done

Samples for testing (for example, a vaginal wet smear) and do extensive tests (such as a CT scan or test of stool) if it appears that the infection has spread. An antifungal medication may be prescribed, and dietary changes may be recommended. These treatments usually cure candidiasis. If there is recurrent bouts of candidiasis, explore the possibility of an immune deficiency or some other disease.

# Treatment Options Drug Therapies

A number of antifungal medications are available to treat candidiasis.

- Antifungal medications—include oral rinses and tablets, vaginal tablets and suppositories, and creams; various side effects
  - Antibiotics—cure certain types of candida
  - Topical vaginal creams and suppositories

• Creams combined with low-strength corticosteroids—reduce inflammation and itching

Most of treatments last from 2 to 3 days to 2 weeks. Reinfection with a new strain of candida also can occur. Some topical vaginal creams and suppositories are available over the counter and may be used for 1 to 7 days.

# Complementary and Alternative Therapies

The "candida diet" allows no alcohol, 100 simple sugars, and very limited amounts of refined foods. Alternative therapies aim to "starve" the yeast and use natural antifungals.

- Vitamin C (500 to 1,000 mg per day), vitamin E (200 to 400 IU per day), and selenium (200 mcg per day) are anti-inflammatory
- Essential fatty acids: antiinflammatory, a mix of omega-6
  (evening primrose) and omega-3
  (flaxseed) may be best (2 tbsp. oil
  per day or 1,000 to 1,500 mg twice
  a day). Reduce animal fats in your
  diet and increase fish and nuts
  - B-complex: B1 (50 to 100 mg), B2 (50 mg), B3 (25 mg), B5 (100 mg), B6 (50 to 100 mg), B12 (100 to 1,000 mcg), folate (400 mcg per day)
- Calcium (1,000 to 1,500 mg per day) to correct deficiency often found in people with yeast infections, and magnesium (750 to 1,000 mg per day) to balance calcium intake
  - Lactobacillus acidophilus (2 to 5 million organisms three times per day) to help restore normal balance of bowel and mucous membranes
- Caprylic acid (1 g with meals) is an antifungal fatty acid
- Avoid simple carbohydrates including fruit juice, yeast, and fermented foods; limit fruit to one serving per day, increase garlic (fungicidal), nuts (essential fatty acids), whole grains (B vitamins), oregano, cinnamon, sage, and cloves (antifungal spices)

### Herbs

- Pau d'arco bark (Tabebuia avellanedae): antifungal, best used as a tea (2 tbsp. boiled in 1 quart of water; 3 to 6 cups per day), or use the cooled tea as a vaginal douche
- Goldenseal (Hydrastis canadensis), Oregon grape root (Mahonia nervosa), and barberry (Berberis vulgaris) are digestive and immune stimulants. Chamomile (Matricaria recutita) and licorice (Glycyrrhiza glabra) are anti-inflammatory. Use a tea or tincture of the five herbs listed above (1 cup tea three times per day or 30 to 60 drops tincture three times per day) for six weeks. Do not take licorice if you have high blood pressure
- Topical treatments include tea tree (Melaleuca alternifolia) lavender essential oil (Lavandula species) two to three times a day; apply full strength to skin infections (discontinue if skin irritation (Calendula develops); marigold officinalis) apply three to five times per day in a salve for rashes
- Fireweed (Epilobium parviflorum): take as a tea for oral, vaginal, and intestinal candidias

### Homeopathy

- Borax for bleeding oral mucosa, especially with diarrhea
- Belladonna for bright red, inflamed skin that is not raw or oozing, but is painful, especially with irritability
- Chamomilla for "diaper" rash, especially with irritability
- Arsenicum album for burning, itching rashes, especially with anxiety
- · Graphites for thick, cracked skin (corners of mouth or heels)
- Kreosotum for leukorrhea that causes itching and swelling

### Acupuncture

May be helpful to stimulate immune system, digestion, and relieve stress.

### Follow Up

Prevent another yeast infection by taking lactobacillus acidophilus when taking antibiotics, avoiding antibiotics that act against a wide variety of bacteria when possible, wearing cotton or silk underwear, maintaining good hygiene, and staying at the proper weight. Women should avoid douches, vaginal deodorants, and bubble baths.

# Special Considerations

Be careful when pregnant.

# 27.Carpal Tunnel Syndrome

Carpal tunnel syndrome (CTS) is an injury caused by a pinched nerve in the wrist, resulting in pain and numbness in the index and middle fingers and weakness of the thumb. The carpal tunnel receives its name from the eight bones in the wrist, called carpals, which form a "tunnel" through which the nerve leading to the hand extends.

# Signs and Symptoms

- Nighttime painful tingling in one or both hands, frequently causing sleep disturbance
- Feeling of uselessness in the fingers
- A sense that fingers are swollen even though little or no swelling is apparent
- Daytime tingling in the hands, followed by a decreased ability to squeeze things

- · Loss of strength in the muscle at the base of the thumb, near the palm
- Pain shooting from the hand up the arm as far as the shoulder

#### What Causes It?

The carpal tunnel is filled with tendons that control finger movement. Tasks requiring highly repetitive and forceful movements of the wrist can cause swelling around the tendons, resulting in a pinched nerve and producing CTS.

# Who's Most At Risk?

People working with small hand tools in manufacturing and those using a computer keyboard on a regular basis are especially at risk. Women are more likely than men to develop CTS. It most commonly occurs in people between the ages of 40 and 60. CTS is associated with health conditions such as Lyme disease, rubella, pregnancy, and menopause. High caffeine, tobacco, or alcohol intake are contributing risk factors.

### What is to be done

He or she can help guide you in determining which treatment or combination of therapies will work best for you. Perform a physical examination and some simple tests to determine if there is a loss of sensation or some weakness in thumb or fingers. Perform more sophisticated diagnostic procedures ranging from a nerve conduction study to electromyography (EMG). X rays or magnetic resonance imaging (MRI) may be used to reveal the cause and the nature of the injury.

# **Treatment Options**

Put the wrist in a splint or brace to keep wrist from bending, and to minimize or prevent pressure on the nerve. Need to wear the splint full-time for 3 to 4 weeks, then at night only.

### Prevention

- Stretch or flex your arms and fingers before beginning work and at frequent intervals.
- Alternate tasks to reduce the amount of repetitive movements.
  - Modify or change daily activities that put pressure on your wrists.
  - Modify your work environment. If you use a computer, have an adjustable keyboard table and chair, and a wrist rest.

# **Drug Therapies**

- Anti-inflammatory drugs, such as ibuprofen, to reduce inflammation
- Corticosteroids, a type of steroid, injected at the site of the carpal tunnel to reduce tendon swelling
- · Diuretics, if needed

# Surgical and Other Procedures

Patients who do not improve with medication and splinting may require surgery. Surgery provides complete relief in 95 percent of cases.

# Complementary and Alternative Therapies

A comprehensive treatment plan for CTS may include a range of complementary and alternative therapies.

# Nutrition

Use of vitamin B6 supplements (50 to 200 mg a day) for up to 3 months provides patients with pain relief and increased

function in 85 percent of cases. B-complex may be used as an adjunct to B6. The following nutrients may have an anti-inflammatory effect: essential fatty acids (1,500 to 3,000 mg a day), and curcumin (250 to 500 mg), both taken between meals. Lipoic acid (100 mg twice a day) can help reduce swelling. Modifying diet to reduce or eliminate saturated fats and fried foods will also decrease inflammation.

### Herbs

A combination of the following herbs in equal parts may decrease inflammation, provide some pain relief, and enhance healing.

- Cramp bark (Viburnum opulus)
- St. John's wort (Hypericum perforatum)
- Wild yam (Dioscorea villosa)

## Homeopathy

An acute dose is three to five pellets of 12X to 30C every one to four hours until symptoms clear up.

- Apis mellifica for joints that are red, hot, or swollen
- Arnica montana, four times per day, for a bruised, beat-up feeling, soreness, achy muscles after trauma or overuse; this treatment may be especially effective if the gel or cream form is used topically
- Guaiacum for CTS that is improved by the use of cold applications

# **Physical Medicine**

Contrast hydrotherapy-alternating hot- and cold-water applications-may offer relief from CTS symptoms. This approach decreases inflammation, offers pain relief, and enhances healing. Immerse wrists fully in hot water for three minutes followed by one minute in cold water, and repeat three times. Do this two to three times daily.

### Acupuncture

Acupuncture restores normal nerve function and can provide long-term relief of pain associated with CTS. Acupuncturists treal people with CTS based on an individualized assessment of the excesses and deficiencies of qi located in various meridians. In the case of CTS, acupuncturists will often target the liver, gallbladder, and kidney meridians.

### Chiropractic

CTS is commonly treated by chiropractors. The methods most chiropractors use to treat CTS include manipulation of the wrist, elbow, and upper spine, ultrasound therapy, and wrist supports. The researchers concluded that chiropractic treatment and conservative medical care are equally effective for people with CTS.

### Massage

Massage may help prevent or relieve symptoms, especially when rosemary and/or St. John's wort oil are used.

# **Prognosis/Possible Complications**

Most people's symptoms clear up within a few months with conventional treatment. If left untreated, CTS in advanced stages can become quite serious, involving a loss of sensation, muscle deterioration, and permanent loss of function.

### Follow Up

In case wrist is placed in a splint or the patient receiving corticosteroids, they need ongoing evaluation .If surgery for CTSis done, a single follow-up visit is normally all that is required.

### 28. Cataracts

Cataracts are clumps of protein that collect on the lens of an eye and interfere with vision. Normally, light passes through the lens and focuses on the retina. The retina is the light-sensitive layer of the eye that sends visual signals to the brain. A cataract occurs when the normally clear lens becomes cloudy. Most cataracts develop slowly over time and are a natural result of aging. Once cataracts become large enough that vision loss interferes with everyday activities such as driving, reading, or watching television, they should surgically removed.

# Signs and Symptoms

- Decreased or blurred vision (often described as a "fog")
- Double vision
- Halo around lights
- "Second sight" when an individual who normally wears reading glasses can suddenly read without them
- · Brown spots in the visual field

# What Causes It?

A cataract develops when protein in the lens clumps together and blocks light from reaching the retina. It is not clear what causes these proteins to clump together, but some researchers speculate that cataracts may develop as a result of chemical changes in the lens that occur with aging. There may be several causes of cataracts including smoking, diabetes, and excessive exposure to sunlight. There are several different types of cataracts:

Age-related cataracts-those that develop with older age

- Congenital cataracts-those that are present at birth or develop in early childhood, usually in both eyes
- Secondary cataracts-those that develop in individuals with medical conditions or in those who use steroids
- Traumatic cataracts-those that develop as a result of an eye injury

### Who's Most At Risk?

The following factors may increase an individual's risk for developing cataracts:

- Being older than 50 years of age
- Genetic diseases (such as Down syndrome)
- Certain medications (such as steroids)
- Maternal infection (such as rubella), drug ingestion, or radiation therapy during pregnancy
- Metabolic disorders (such as diabetes mellitus)
- Eye disorders (such as glaucoma)
- High-voltage electrical injury

# What is to be done?

Make a diagnosis and help determine which treatment or combination of therapies is most appropriate.

- Visual acuity test-measures vision at various distances
- Pupil dilation-the pupil is widened with eye drops to reveal more of the lens and retina
- Tonometry-measures fluid pressure inside the eye

# **Treatment Options** Prevention

- Wear ultraviolet (UV)-blocking sunglasses
- Abstain from smoking cigarettes Certain medications may help delay cataract formation, but none are known to reverse the progression of cataracts once they form.

# **Drug Therapies**

- Eye drops (containing phenylephrine and homatropine) may be prescribed to dilate the pupil and provide better vision in some individuals
- Aldose reductase inhibitors may help prevent or delay cataract formation in people with diabetes
- Antibiotics and steroid eye drops may be prescribed following the removal of cataracts

# **Surgical and Other Procedures**

In its early stages, a cataract usually does not interfere with vision. Over time, however, a cataract may grow larger and cloud over more of the lens, making it difficult to see. When cataracts cause vision loss that interferes with everyday activities such as driving, reading, or watching television, surgery is the only effective treatment. Recommend that an individual remove a cataract if he or she has other eye conditions, if the cataract threatens to cause another eye disorder, or if the presence of the cataract prevents examination treatment of another eye problem. During surgery, the cloudy lens is replaced with a substitute lens.

### Complementary and Alternative **Therapies** Nutrition

Antioxidants may protect the lens against damage caused by free

radicals. Dark leafy greens, orange and yellow vegetables, vitamins A and C, and beta-carotene are  $g_{00i}$ sources of antioxidants. berries, particularly blueberries may also help protect the lens,

Glutathionine supplements protect against UV light; selenium supplements also help glutathionine in its active form

Vitamin E may also protect the lens against free radical damage.

### Herbs

- Dusty miller (Cineraria maritima) succus (preserved plant juice); may cause eve irritation
- Bilberry (Vaccinium myrtillus)
  - Ginkgo (Ginkgo biloba)

# Homeopathy

Very few studies have examined the effectiveness of specific homeopathic therapies

# **Physical Medicine**

Contrast hydrotherapy (alternating hot and cold water applications to the face or back of neck) may improve circulation to the head and facilitate the transport of nutrients to the eye.

# **Prognosis/Possible Complications**

Complications from surgery are rare, but can include infection, bleeding, retinal detachment, inflammation, loss of vision, of light flashes.

### Follow Up

Prescribe eye drops or medications to help healing and control the pressure inside the eye for a few days following surgery. An eye shield or eyeglasses may also be necessary. Schedule eye exams as needed to check on progress.

# 29. Cellulitis; Skin Infection

Cellulitis is an inflammation of the skin and the connective tissue beneath the skin, caused by a bacterial infection. Cellulitis most often affects the legs, but it may also affect the arms, face, and scalp, is cured Generally, cellulitis antibiotics; however, the condition sometimes leads to serious complications.

# Signs and Symptoms

The following signs and symptons accompany cellulitis:

Pain and tenderness

Edema (swelling caused by fluid in the tissues)

Erythema (abnormal redness of the skin)

Skin that is warm to the touch

- Fever
- Chills

# What Causes It?

Cellulitis is caused by a bacterial infection, most often by group A streptococci and Staphylococcus aureus. Other types of bacteria may cause cellulitis in children, people in specific occupations (such as fish and meat handlers), and those exposed to water in aquariums and swimming pools. In 50 to 60% of cases, the patient has had some kind of skin injury. Upper respiratory infections precede one third of erysipelas cases. Erysipelas is an acute, superficial type of cellulitis involving the lymph system. It is seen in infants, young children, and the elderly, and is generally caused by streptococcal infection.

### Who's Most At Risk?

- General weight loss and weakness, especially from chronic illness
- Diabetes
- Peripheral vascular disease 0
- Malnutrition 0
- Contaminated wounds
- A weakened immune system
- A general infection 0
- media, otitis Sinusitis. epiglottitis, especially in children
- surgery, Lymphedema from radiation therapy, or cancer that has spread to lymph nodes
- Animal bites
- Vein surgery

# What is to be done

Do a thorough physical examination to determine what is causing the condition and which antibiotic therapy to prescribe. Lab tests and imaging may also be used.

Treatment Options Treatment Plan Standard treatment includes antibiotics in combination with complete bed rest. It is important to elevate the affected arms or legs, to keep still, and to apply cool, wet, sterile bandages to relieve discomfort.

**Drug Therapies** 

Prescribe the appropriate antibiotics for infection as well as pain relievers if needed.

Surgical and Other Procedures

Surgery to drain any underlying abscess (infected tissue) may be necessary antibiotics are not effective.

#### and Alternative Complementary **Therapies**

Because cellulitis can progress rapidly, it is important to start antibiotics as soon as possible. This may prevent complications from the skin and soft tissue infection. Several therapies, though, may reduce the risk of developing cellulitis or ease some of the symptoms when used in conjunction with conventional care.

Some patients with have successfully used magnet therapy chronic, recurring cellulitis, although there has been no scientific research to date to adequately test the value treatment. Magnets improve this circulation to the area by removing wastes and by delivering nutrients more efficiently. Magnets are also thought to lessen pain by altering the transmission of pain signals; by realigning the molecules in cell membranes, which may improve cell function; and by changing levels of enzymes and other chemicals in the body.

### Nutrition

Zinc and vitamins A, C, and E are used to support the immune system. Vitamins A and E are also thought to benefit the skin. Flavonoids (compounds in such fruits as citrus, blueberries, grapes; in vegetables, including onions; and in tea and red wine) appear to help reduce lymphedema and to reduce the risk of cellulitis. Bromelain (250 to 500 mg three times a day) may be used to reduce inflammation and edema (swelling from fluid buildup); it works well when used with the flavonoid quercetin.

### Herbs

- (Echinacea spp.) Echinacea widely used in clinics to boost the immune system in order to prevent infection. In addition, the World (WHO) Organization Health supports the use of Echinacea purpurea externally for treatment of inflammatory skin conditions.
- Yarrow (Achillea millefolium) is approved in Great Britain for skin infections and inflammation; it is applied topically.
- Comfrey root (Symphytum officinale) is an anti-inflammatory. Some clinicians suggest a paste can be made from comfrey root and placed on the affected area twice a

day to speed healing. Goldenseal root (Hydrastis canadensis), which has both anti-inflammatory and antibacterial properties, and slippery elm (Ulmus fulva), an antiseptic, may be added to a comfrey paste to increase its beneficial effects.

- Calendula flower (Calendula officinalis) is approved in Germany for topical application to leg ulcers (open wounds of the leg that can readily become infected).
- Fenugreek seed (Trigonella foenumgraecum), which contains flavonoids, is approved in Germany external use on inflammation and infections.

# Homeopathy

- Apis Mellifica for swelling with a puffy appearance that worsens with heat and pressure, especially in the afternoon and is better with cold applications, open air, movement, and sitting upright
- Cantharis for restless and anxious individuals; may be used for children; only available under the direction of a licensed homeopath
- Lachesis for symptoms that tend to be worse on the left side of the body and during and immediately after sleep
- Mercurius for individuals who are bothered by both heat and cold, and are often trembling and impulsive

- Rhus toxicodendron individuals who are restless and anxious with itching that tends to worsen at night but is relieved by warm compresses or pressure
- Sulphur for hot, burning skin with itching that worsens at night and with washing

### Acupuncture

Acupuncture and other Traditional Chinese Medicine practices may help address the underlying cause of cellulitis and may enhance the immune system.

## Massage

Massage should not be used if you have an active infection. However, massage that promotes lymph drainage, when used in conjunction with compression and exercise may help prevent cellulitis.

## **Prognosis/Possible Complications**

Antibiotics usually cure cellulitis. While complications are rare, they can be serious and even life-threatening if the infection spreads to the blood. Complications are more common in very young children, the elderly, or in people who have immune system disorders. Possible complications include abscesses. gangrene, thrombophlebitis. Some people are prone to recurrence of cellulitis, often in the same area, leading to permanent skin changes. Gangrene may result in loss of a limb.

## Follow Up

See periodically to prevent complications.

# 30. Cervical Dysplasia; Cervical Cancer; Pap smear

Cervical dysplasia is a condition characterized by the presence of abnormal cells in the cervix, indicating either precancerous or cancerous cells. condition is classified as low-grade or highgrade, depending on the extent of the abnormal cell growth. Low-grade cervical dysplasia progresses very slowly and typically resolves on its own. High-grade cervical dysplasia, however, tends progress quickly and usually leads cervical cancer. An estimated 66% cervical dysplasia cases are estimated to progress to cancer within 10 years.

# Signs and Symptoms

produces no Cervical dysplasia often symptoms and is usually discovered during an annual Pap smear. Occasional signs and symptoms of the condition can include:

- Genital warts
- Abnormal bleeding
- Spotting after intercourse
- Vaginal discharge
- Low back pain

### Causes

The precise cause of cervical dysplasia is not known. Studies have found a strong association between cervical dysplasia and papilloma infection with human (HPV), but additional factors must also be gl

play in order for cervical cells to change and become precancerous.

# Risk Factors

The following may increase an individual's risk for developing cervical dysplasia:

- Human papilloma virus (HPV) infection
- Genital warts
- Smoking
- Early onset of sexual activity (younger than 18 years old)
- Multiple sexual partners
- Having a partner whose former partner had cervical cancer
- History of one or more sexually transmitted diseases, such as genital herpes or HIV
- Having suppressed immune function from, for example, HIV or the use of chemotherapeutic medications to treat cancer
- Long-term use (5 or more years) of birth control pills
- Being born to a mother who took diethylstilbestrol (DES) to become pregnant or to sustain pregnancy
- Low levels of folate (vitamin B9) in red blood cells
- Dietary deficiencies in vitamin A, beta-carotene, selenium, vitamin E, and vitamin C

### Diagnosis

If any of the symptoms mentioned earlier are present, perform a physical including an abdominal, back, and pelvic examination. As part of the pelvic exam, a Pap smear will be performed to detect precancerous or cancerous cells in the cervix. A Pap smear is also performed annually for screening purposes even when no symptoms are present. This test may be performed more or less often than once a year, depending on individual medical history and risk factors cervical cancer. For example, individual who has had abnormal Pap smears in the past may require more tests than an individual who has always had normal Pap smears. But, if patient have had normal pap smears 3 years in a row and is over age 30, perform a Pap smear test only every 2 to 3 years. If there are any questionable or unclear results from the Pap smear, one of the following tests will be performed by a gynecologist:

- Colposcopy a procedure in which the physician uses a viewing tube with a magnifying lens to examine the abnormal cell growth in the cervix
- Biopsy a small sample of tissue is removed from the cervix and examined under a microscope for any signs of cancer

### **Preventive Care**

While there is no established strategy for preventing cervical dysplasia, regular Pap smears are the most effective and reliable method of identifying the condition in its early stages. Such early detection is key to preventing the condition from progressing to cervical cancer. Women should begin receiving annual Pap smears as soon as they become sexually active or no later than age 21. Women whose mothers took DES during pregnancy are advised to begin regular Pap smears at age 14, at the onset of their first menstrual period, or as soon as they become sexually active, whichever comes first. Barrier contraceptives, such as condoms, may offer some degree of protection from cervical dysplasia. Some lifestyle modifications may also help prevent the development of cervical dysplasia:

- Practicing safe sex
- Not smoking
- Eating a diet rich in beta-carotene, vitamin C, and folate (vitamin B9) from fruits and vegetables

### **Treatment Approach**

Surgical removal of abnormal tissue is the treatment of choice for cervical dysplasia. Medications are not used to treat cervical dysplasia, and few complementary or alternative therapies have been evaluated for their effectiveness in treating the condition. Several studies indicate, however, that the development and progression of cervical dysplasia may be related to certain nutritional deficiencies, including folate, beta-carotene, and vitamin C.

### Medications

Medications are not used to treat cervical dysplasia.

# Surgery and Other Procedures

These procedures include:

 Cryocauterization – extreme cold destroys abnormal cervical tissue; this is the simplest and safest procedure and it usually destroys 99% of the abnormal tissue; frequently performed without anesthesia

- Laser therapy lasers destroy abnormal cervical tissue with less scarring than cryocauterization; more costly than cryocauterization; performed with local anesthesia; 90% cure rate
- Loop electrosurgical excision (LEEP) thin loop wire excises visible patches of abnormal cervical tissue; performed with local anesthesia; 90% cure rate
- Cervical conization small coneshaped sample of abnormal tissue is removed from the cervix; requires general anesthesia; 70% to 98% cure rate, depending on whether cancer cells have spread beyond the cervix

# **Nutrition and Dietary Supplements Beta-carotene**

Deficient in beta-carotene may be more likely to develop cancerous or precancerous cervical lesions, but this relationship remains inconclusive. Oral supplementation with beta-carotene may promote a regression, or decline in the signs of cervical dysplasia.

# Folate (Vitamin B9)

Like beta-carotene, some evidence suggests that folate deficiencies may contribute to the development of cancerous or precancerous lesions in the cervix. Researchers also theorize that folate consumed in the diet may improve the cellular changes seen in dysplasia by lowering homocysteine (a substance believed to contribute to the severity of cervical dysplasia) levels. The benefit of using dietary folate to prevent or treat cervical dysplasia has not been sufficiently proven. Other dietary nutrients that may protect against the development of cervical cancer include:

- Vitamin C
- Selenium
- Vitamin E
- Vitamin A
- Vitamin B12
- Vitamin B6

In addition, some of the risk factors for cervical dysplasia may cause certain nutritional deficiencies. For example, smoking may contribute to a deficiency in vitamin C and long-term use of birth control pills may diminish folate levels. Research has yet to prove whether taking vitamin C and folate supplements can help prevent or treat cervical dysplasia or cervical cancer.

# Other Considerations Pregnancy

- Cases of cervical dysplasia may advance during pregnancy, but treatment can generally be deferred until after delivery
  - A biopsy to diagnose cervical dysplasia is safe to perform during pregnancy
  - Treatment with cervical conization may adversely affect fertility

**Prognosis and Complications** 

Pap smears are essential to detecting precancerous lesions as well as early stages of cervical cancer. The regular use of Pap smears as a screening test has prevented millions of cases of cervical cancer and has saved a similar number of lives. Despite their value, they are not always 100% accurate. Up to 2% of women with normal Pap smear results actually have high-grade cervical dysplasia at the time of evaluation. In some rare cases, Pap smears may produce "false positive" results, meaning that a healthy woman may be falsely diagnosed with cervical dysplasia. Despite these errors. Pap smears are the most effective and reliable method of identifying cervical dysplasia. Cervical cancer, a complication of cervical dysplasia, is the leading cause of death in many developing and poorer countries. Most cervical cancer deaths occur in women who have not had a Pap smear. Cervical cancer constitutes more than 10% of cancers worldwide and it is the second leading cause of death in women between the ages of 15 and 34.

With early identification, treatment, and consistent follow-up, nearly all cases of cervical dysplasia can be cured. Without treatment, many cervical dysplasia cases progress to cancer. Women who have been treated for cervical dysplasia have a lifetime risk for recurrence and malignancy. Fortunately, while the incidence of cervical

dysplasia has been on the rise, the incidence of cervical cancer has declined dramatically. This may be due to improved screening techniques, which identify cases of cervical

dysplasia in the early stages, before they have progressed to cancer.

# 31. Chronic Fatigue Syndrome (CFS); Fatigue, Chronic Syndrome

With chronic fatigue syndrome (CFS), a patient is unable to do even half of normal daily activities and the feeling doesn't go away. This syndrome affects twice as many women as men. It may last a month, a couple of years, or many years.

# Signs and Symptoms

- Severe fatigue that comes on suddenly, especially after an attack of flu
- Low-grade fever (100.4°F) and chills
- Sore throat and swollen glands
- Muscle and joint aches
- Headaches
- Feeling of being in a fog and unable to concentrate or remember

### What Causes It?

No one knows what causes CFS, but a virus may be responsible. Risk factors include extreme stress or anxiety, flu-like illness that doesn't completely go away, and poor eating habits.

### What is to be done

Blood or urine test need to rule out other problems. Prescribe drugs for symptoms, herbs, vitamins, or dietary changes. Usually these treatments and time will be enough to cure the problem. Check for other conditions, such as a psychiatric illness, muscle disease, or exposure to a toxic agent that can cause symptoms similar to those of CFS.

# **Treatment Options**

- Antidepressants—depending on type, in addition to relieving depression, they can reduce fatigue, muscle tension, or insomnia; various side effects
- Benzodiazepines—help reduce anxiety; various side effects
- Histamine blockers—block production of stomach acid, improving energy
- Nonsedating antihistamines relieve allergy symptoms; side

effects include drowsiness and headache

 Immune system boosters—to activate or enhance the immune system; some of these drugs are experimental

# Complementary and Alternative Therapies

Counseling, support groups, meditation, yoga, and progressive muscle relaxation are stress-management techniques that may help as well.

### Nutrition

Avoid refined foods, sugar, caffeine, alcohol, saturated fats, dairy products, and gluten-containing grains. Eat more fresh vegetables, legumes, whole grains (nongluten), protein, and essential fatty acids (found in nuts, seeds, and cold-water fish). The following supplements may help reduce symptoms of CFS.

- Beta-carotene (50,000 IU per day) to strengthen immune function.
- Vitamin C (250 to 500 mg two times per day) to increase endurance.
- B-complex (50 to 100 mg per day or 2 ml by injection one to two times per week) with additional B6 (100 mg per day) and B5 (100 to 250 mg per day) to reduce the effects of stress.
- Pantothenic acid (4 to 7 mg per day).
- Magnesium aspartate (400 to 1,000 mg per day) to support energy production.
- L-carnitine (330 mg one to three times per day) to support energy production in the cells.

### Herbs

A tincture of Siberian ginseng (Eleutherococcus senticosus), schizandra berry (Schizandra chinensis), ashwaganda root (Withania somnifera), gotu kola (Centella asiatica), and astragalus root (Astragalus membranaceus). Take 20 to 30

drops two to three times per day. These are safe to take long-term and may need to be taken for four to six months for maximum benefit. Herbs that support overall vitality and relieve exhaustion include licorice root (Glycyrrhiza glabra), lomatium root (Lomatium dissectum), skullcap (Scutellaria lateriflora), passionflower (Passiflora incarnata). lavender (Lavandula angustifolia), and rosemary (Rosmarinus officinalis). Take 20 to 30 drops two to three times per day. Do not take licorice if you have high blood pressure. Essential oils of jasmine, peppermint, and rosemary are calming and restorative and may be used aromatherapy. Place several drops in a warm bath or atomizer, or on a cotton ball.

Homeopathy

- Arsenicum for restlessness and fatigue accompanied by chills and burning pains that are worse at night
- Gelsemium for mental exhaustion, including drowsiness and indifference, and physical weakness, such as heaviness of the limbs and eyelids
  - Pulsatilla for people who are moody and emotional, although

- usually with a calm and gently
- Sulphur for people who feed fatigue and tend to be lazy and unproductive; usually not as emotionally sensitive as those requiring Pulsatilla

# Acupuncture

There is also some evidence that acupuncture may help boost an individual's immune system.

# Chiropractic

It is believed that spinal manipulation may have a stimulating effect on the nervous system.

# Massage

Therapeutic massage can reduce stress-related symptoms, improve circulation, and increase your overall sense of well being.

# Follow Up

Wants routine checkups while taking the drugs or following the treatments. .

# **Special Considerations**

During pregnancy, avoid high doses of vitamin C and needs careful supervision for the use of herbs..

# 32. Chronic Obstructive Pulmonary Disease; Chronic Bronchitis; Emphysema

Chronic obstructive pulmonary disease (COPD) causes severe shortness of breath, which can result from chronic bronchitis, emphysema, or both. Chronic bronchitis is defined as a constant cough and excessive mucus production that lasts for at least three months for more than two consecutive years. Emphysema is characterized by damage to the lungs, which causes them to lose their elasticity, forming pockets of dead air called bullae. Chronic bronchitis and emphysema are generally caused by prolonged use of tobacco. Long time cigarette smoking can deplete levels of an enzyme called alpha-1 anti-trypsin. Normal levels of alpha-1 anti-trypsin help protect the lungs from damage. There is a less common form of emphysema that can occur in non-smokers. It is caused by an inherited deficiency of this enzyme

# Signs and Symptoms

- Ongoing cough, often with phlegment that may be hard to "bring up"
- Shortness of breath during exertion and, eventually, at rest
- Excessive mucus production and impaired ability to eliminate mucus
- Progressive difficulty exhaling
- Wheezing
- Recurrent respiratory infections
- Decreased exercise tolerance including walking upstairs of carrying small packages

#### Causes

Smoking is the number one cause of COPP. It can also be caused by exposure pollutants or toxic chemicals. One rare form is inherited

# **Risk Factors**

• Smoking, especially if you have a history of smoking one pack per day for 20 years or the equivalent (for

- example, 2 packs per day for 10 years)
- Inherited deficiency of an enzyme called alpha-1 anti-trypsin that normally helps protect the lungs from damage
- Passive smoking (ongoing exposure to cigarette smoke from others)
- Being over age 50
- Work exposure to toxic chemicals such as silica or cadmium
- Working around industrial smoke, excessive dust, or other pollutants (for example, miners, furnace workers, and grain farmers)

### Diagnosis

Examine for wheezes and decreased breath sounds. Look for signs of increased work involved in breathing like flaring of the nostrils and contraction of the muscles between ribs. Respiratory rate may be elevated. A chest X ray will probably be ordered which will likely reveal overexpanded areas in the lungs. A CT scan may be ordered to check the severity of COPD. A pulse oximeter may be used to check the level of oxygen in blood. An arterial blood gas may show low levels of oxygen and high levels of carbon dioxide, particularly during the late stages of disease. Lung function tests show decreased rates of airflow while exhaling and over-expanded lungs.

# **Preventive Care**

- Avoid smoking
- been has before there permanent damage to lungs
- Avoiding respiratory infections is very important. A pneumococcal vaccine once in lifetime protects from pneumonia.
- Eating foods rich in antioxidants, magnesium and other minerals, and (including omega-3 fatty acids fruits, vegetables, and fish) may help prevent the development of COPD in the first place avoid worsening of symptoms if already it is there.

# **Treatment Approach**

No smoking is the key to preventing COPD or to stop it from getting worse. Exercising and eating a healthy diet help.

### Lifestyle

Quitting smoking is crucial. Other lifestyle measures include dietary changes and exercise.

### Diet

Poor nutrition, particularly deficiencies in antioxidants and certain minerals including vitamins A, C, and E. potassium. magnesium, selenium, and zinc is associated with having COPD and, possibly, with worsened lung function. Such nutrients can be obtained from an adequate daily intake of fresh fruits and vegetables, nuts, and whole grains.

### Exercise

Walking is a good exercise to build endurance. Attending a comprehensive pulmonary rehabilitation is the best way to learn exercise and safe breathing techniques

### Breathing

There are breathing exercises (for example, a pursed lip technique, breathing from the diaphragm, or using a spirometer [breathing device] twice a day) that may help improve lung function. It is important, when learning breathing techniques, to work with an appropriately trained professional because the techniques are not good for everyone with COPD.

### Medications

- Bronchodilators(including ipratropium, albuterol, isoproterenol, metaproterenol, pirbuterol, terbutaline, levalbuterol, salmeterol, and formoterol) increase airflow and help make it easier to breathe
- Theophylline another type of bronchodilator
- Corticosteroids—reduce inflammation; taken by inhaler; when an attack is severe.
- Antibiotics—used to treat COPD when symptoms worsen
- Erdosteine---a mucomodulater reduces mucus hyperscretion and sputum volume, protects against smoke induced alpha1 antitrypsin inactivation, reduces markers of bronchial inflammation and preserves lung function.

# Surgery and Other Procedures

When flare-ups are severe, requiring hospitalization, use of oxygen and nebulized lung treatments may be necessary. Occasionally, mechanical ventilation on a respirator is needed during the hospital course. At late stages of the disease, many people with COPD need continuous oxygen at home. Lung transplant is sometimes performed for severe cases of COPD.

# Nutrition and Dietary Supplements Bromelain

People with COPD specifically, bromelain can help reduce cough and diminish mucus production from a respiratory infection.

# Magnesium

Magnesium deficiency may be associated with an increased risk of developing emphysema and other lung diseases. Sometimes, intravenous magnesium (that is, magnesium delivered through a vein) is part of the treatment for a COPD flare-up in the hospital. Foods including legumes, whole grains, and green leafy vegetables, should be a regular part of a healthy diet Checking blood magnesium level

# N-acetylecysteine (NAC)

NAC appears to have cancer prevention properties in people who are at risk for lung cancer (like chronic smokers who are also at risk for COPD).

# **Omega-3 Fatty Acids**

Some experts believe that dietary and supplemental forms of omega-3 fatty acids, including alpha-linolenic acid (ALA) found in walnuts and flaxseeds, may prove helpful for COPD.

### Vitamin C.

Increasing the amount of fresh fruit by one or two servings per week may help improve lung function.

### Other

- Coenzyme Q10
- L-carnitine

### Herbs

- Eucalyptus (Eucalyptus globulus)—
   acts as an expectorant, which means
   that it loosens phlegm in the
   respiratory passages, making it
   easier to cough up mucus from your
   airways.
- Garlic (Allium sativum)

   may help
  fight infection and has antioxidant
  properties (see earlier discussion
  under Diet in section entitled
  Lifestyle as well as the section on
  Nutrition and Dietary Supplements).

- Licorice (Glycyrrhiza glabra) used by professional herbalists to relieve respiratory ailments such as bronchitis; considered a demulcent (soothing, coating agent); you should not use this herb if you have high blood pressure.
- Lobelia (Lobelia inflata) also called Indian tobacco, lobelia has a long history of use by Native Americans as an herbal remedy for respiratory ailments including bronchitis
- Marshmallow (Althout officinalis)— long history of use in traditional healing systems for bronchitis.
- Red Clover (*Trifolium pretense*)used traditionally for spasmodic cough and bronchitis.
- Saw Palmetto (Serenon repens/Sabal serrulata) early in the 20th century, saw palmetto was listed in the US Pharmacopoeia as an effective remedy for bronchitis.

## Acupuncture

Acupuncture may help relieve shortness of breath in those with COPD.

# Mind/Body Medicine

- Joining a support group where members share common experiences and problems often helps the stress of having COPD.
- Yoga and tai chi are practices the use deep breathing techniques and meditation; these practices may be helpful if you have COPD.
- Biofeedback is another method for helping to learn a more relaxed and therefore, more comfortable breathing pattern.
- Music therapy can help relieve anxiety associated with COPD and possibly, shortness of breath.
- Listening to relaxation tapes on regular basis (for example, one of two times per day) may help reduce anxiety and shortness of breath associated with COPD.

Prognosis and Complications
COPD is considered a chronic illness.
Whatever damage there is to lungs will not improve. If you stop smoking, the damage ilkely to not get worse. If you continue to

smoke, however, your lungs and lung function will continue to deteriorate.

Potential complications of COPD include:

- Abnormally high pressure in the called lungs pulmonary hypertension
- Enlargement of the heart and heart failure, leading to excessive fluid and weight gain
- Abnormal rhythms of the heart

- Dependence on mechanical ventilation (a respirator) and/or oxygen therapy
- Pneumothorax (collapsing of part of the lung due to air leaking from the
- Pneumonia and other infections
- Eventually, weight loss and wasting can occur

# 33. Cirrhosis Of Liver; Liver Disease

"Liver is lever of our body"

-Anonymous.

Cirrhosis is scarring of the liver that occurs as a result of chronic liver disease. Scarring causes disruptions to the flow of blood and bile through the liver and keeps the liver from working properly. Scarring of the liver, once it occurs, cannot be repaired. But because cirrhosis progresses very slowly, early treatment can prevent further damage.

## Signs and Symptoms

- Fatigue and weakness
- Loss of appetite, weight loss, and nausea
- Small, red spider-like blood vessels under the skin
- Yellowing of the skin and eyes (jaundice)
- Redness of the palms of the hands (palmar erythema)
- Swelling of the belly caused by fluid retention (ascites)
- Swelling of the legs, feet, and back caused by fluid buildup (edema) Breast development in males and, possibly, shrinking testicles
- Whole body itching (called pruritus)
- Mental confusion (called hepatic caused encephalopathy), buildup in the blood of harmful toxins
- Decreased urine output
- Pale or clay colored stools
- Nosebleeds or bleeding gums
- Abdominal fullness, pain, indigestion
- Fevers
- Impotence and loss of interest in sex

- Bleeding hemorrhoids
- Vomiting blood

#### Causes

Excessive amounts of alcohol over time cause liver damage in virtually anyone, although not necessarily cirrhosis.

- Viral diseases hepatitis B and hepatitis C
- Inherited diseases such as cystic fibrosis
- Autoimmune inflammation of the liver
- Disorders of the drainage system of the liver (the biliary system)
- Metabolic disorders of iron and (hemochromatosis and Wilson's disease respectively) each of which can deposit in the liver
- Medications and environmental toxins (rarely).

# Risk Factors

### Related to Alcohol:

- Women tend to develop liver disease at lower quantities of alcohol intake than men
- Obesity may increase chances of developing alcoholic liver disease because of fatty deposition in the liver
- Genetic factors

### Certain medical conditions, such as:

- Hemochromatosis
- Wilson's disease
- Biliary system disorders
- · Immune system disorders of the liver

- Chronic hepatitis B or C
- Nonalcoholic steatohepatitis (NASH) – fatty deposition in the liver due to conditions other than heavy alcohol use

# Diagnosis

Visible signs include yellowing (jaundice) of eyes and skin, red spider-like blood vessels just under the surface of skin, and redness of palms. Size of which may be enlarged at early stages of liver damage, but will shrink when scar tissue from cirrhosis sets in and check for excess breast tissue. small testicles in men, and a distended abdomen. An x-ray or ultrasound may be done to look at the size of liver and spleen. Blood test for complete blood count, blood clotting factors, and liver function tests. Also, a liver biopsy may be necessary to determine the extent of damage to the liver and, possibly, to help figure out the underlying cause.

### **Preventive Care**

- · Avoid excessive intake of alcohol
- Take precautions to avoic contracting hepatitis B and C
- Practicing safe sex and get immunized against hepatitis B
- Regular checkup is needed if you have chronic hepatitis
- Avoid inhaling chemicals or getting them on skin

# **Treatment Approach**

Treatment is directed at addressing the underlying cause, such as abstinence from alcohol, interferon or other medications to build up your immune system if there is chronic viral hepatitis, or corticosteroids for autoimmune hepatitis. Treatment of complications includes taking certain medications for disorders of the brain (encephalopathy) and infections, dietary modifications to treat excess abdominal fluid, and surgery, for bleeding or enlarged veins. In certain cases liver transplant will be necessary.

### Lifestyle

It is important to abstain from drinking alcohol to prevent further damage to the liver. Alcoholics Anonymous may be as a good place to start rehabilitation and maintain abstinence. Medications that may cause liver damage such as acetaminophen, is to be avoided. Dietary changes, such as

restricting salt intake, may be necessary treat complications of cirrhosis.

### Medications

Antibiotics— for treatment of infected ascites (called peritonitis); treatment typically lasts 10 days and you may need to be hospitalized if intravenous antibiotics are required.

Beta-blockers - typically propranolol or nadolol, reduce the heart rate and can lower the pressure in veins going to the liver. This helps to reduce the likelihood of bleeding from these veins. If the varices do bleed you may need a special procedure

Diuretics—usually spironolactone and furosemide help to reduce fluid buildup.

Lactulose—reduces toxic levels of ammonia that cause hepatic encephalopathy, which can result in disturbances in consciousness or deep coma.

Somatostatin (a natural hormone) and similar (synthetic) agents, as well as vasocontrictors — prevent bleeding from varices by causing blood vessels to narrow.

Metadoxine—accelerates the normalization of liver function tests and ultrasonograpic changes, even in those who do not completely abstain from alcohol.

# Surgery and Other Procedures

A liver biopsy may be necessary to make a diagnosis of cirrhosis, determine its cause, and to assess the extent of liver damage. Surgery and surgical procedures may be required to stop and prevent certain complications of cirrhosis. These situations include:

- Endoscopic procedures to stop bleeding from varices in the esophagus that are under pressure from liver failure. Endoscopy allows direct visualization of the esophagus and the area that is bleeding.
- Shunt placement to redirect blood from the liver to other parts of the circulation; may be performed alleviate portal hypertension and stop bleeding varices that were not controlled by the endoscopic procedure.
- Drainage of excess fluid from the abdomen
- Liver transplant

# Nutrition and Dietary Supplements

Malnutrition is often a problem for people with cirrhosis. To avoid malnutrition, it is important to maintain a well-balanced diet of 2,000 to 3,000 calories per day. Diet should be full of fresh fruit, vegetables, and whole grains. Limit fluid intake, and salt restriction.

# **Dietary Restrictions**

#### Protein

High-quality dietary protein may be particularly important too much protein can raise ammonia levels and trigger hepatic encephalopathy. The type of protein therefore, is very important. There is no limit on the amount of vegetable protein (such as soy) but need to restrict intake of animal protein.

### Sodium (salt)

If there is fluid retention, cut intake of sodium to less than 2,000 mg a day Avoiding processed and prepared foods will do a great deal to reduce your salt intake because these foods are very high in sodium. Eat good amounts of fresh foods, because they contain very little sodium. Instead of adding salt to your food, try lemon juice or black pepper.

### **Limiting Fluids**

Fluid restriction may be necessary if there is ascites.

### Iron

Too much iron can cause damage to the liver. Avoid iron-rich foods, such as red meats, liver, and iron-fortified cereals and do not cook with iron-coated cookware and utensils.

### Shellfish

Uncooked shellfish should be avoided because it may carry dangerous bacteria called Vibrio vulnificus.

# **Dietary Supplements**

# Antioxidants

Low selenium levels may worsen the toxic effects of alcohol on the liver. Eating fresh fruits, vegetables, and whole grains is a great way to include antioxidants.

# Betaine

Betaine supplement may improve liver function, reduces fat in the liver, and diminished abdominal pain.

# Carnitine

Supplementation with carnitine has been shown to prevent and reverse the damage

caused by alcohol-induced fatty buildup in the liver

# Omega-6 fatty acids

Gamma-linolenic acid (GLA), an omega-6 essential fatty acid found in evening primrose oil (EPO) and borage seed oil, may help lessen cravings for alcohol and prevent liver damage.

### S-adenosylmethionine (SAMe)

It may provide protection against liver damage and scarring and may improve survival rates in people with cirrhosis due to alcohol abuse.

### Spirulina

Spirulina is a type of blue-green algae found in many ponds and lakes. It is considered a complete protein because well over half of it consists of amino acids - the building blocks of protein.

### Other

People with cirrhosis may be deficient in zinc and vitamin K. Supplementation with zinc is helpful in treating the disease, and while vitamin K is often used to help prevent excessive bleeding in people in the earlier stages of liver disease, it is generally not very helpful once cirrhosis has set in.

### Herbs

### Celery Seed (Apium graveolens)

Protect the liver from damaging agents such as acetaminophen.

### Dandelion (Taraxacum officinale)

Dandelion is a natural diuretic and, therefore, has been used traditionally by herbal specialists for a wide range of conditions requiring mild diuretic treatment such as liver disease with excessive fluid.

### Green Tea (Camellia sinensis)

Green tea has large amounts of vitamin K and, therefore, may help replenish this necessary vitamin in the early phases of liver damage

### Licorice root (Glycyrrhiza glabra)

Taking glycyrrhizin (an active component of licorice root) in combination with cysteine and glycerine may prove useful for helping reduce the risk of hepatitis C.

# Milk thistle (Silybum marianum)

Milk thistle improves liver function in people with mild liver disease but was less effective for those with severe liver disease such as cirrhosis.

# Turmeric (Curcuma longa)

Turmeric may protect the liver from a number of damaging substances such as carbon tetrachloride and acetaminophen. Turmeric accomplishes this, in part, by helping to clear such toxins from the body and by protecting the liver from damage.

# Homeopathy

- Nux vomica
- Staphysagria
- Belladonna
- Stramonium
- Chelidonium
- Zincum
- Carduus marianus
- SAconitum
- Belladonna
- Chelidonium
- China
- Lycopodium
- Mercurius
- Phosphorus

### Mind/Body Medicine

Joining support groups in which members share common experiences and problems can often help reduce the stress of a chronic illness such as cirrhosis.

## Acupuncture

Acupuncture has shown potential as an effective treatment for addiction, like alcohol addiction.

### Other Considerations

- Kava kava (an herb used for anxiety and tension) can be toxic to the liver and cause severe hepatitis and even liver failure if taken excessively.
- Vitamin A in large quantities can be toxic to the liver.

# Pregnancy

Milk thistle should not be used by pregnant or breastfeeding women.

# **Prognosis and Complications**

- Portal hypertension
- Bleeding esophageal varices
- Hepatic encephalopathy may lead to coma
- Ascites and bacterial peritonitis
- Sepsis
- Liver cancer
- Kidney failure
- Osteoporosis
- Insulin resistance
- Gallstones

With proper diet, medical management and avoidance of alcohol, we can drastically slow down the rate of progression of liver damage.

# 34. Colorectal Cancer; Cancer, Colorectal

Colorectal cancer—cancer of the colon and rectum-is the second most commonly diagnosed cancer in American men and women. Colorectal cancer develops in the digestive system, which processes food for energy and rids the body of solid waste. Together, the colon and rectum form a muscular tube about 5 feet long known as the large intestine. The colon absorbs water and nutrients from food and serves as a storage place for solid waste. The waste moves from the colon into the rectum where it passes out of the body through the anus. Cancers affecting either of these organs are called colorectal cancer. Most colorectal cancers arise from benign polyps that begin growing on the inner lining of the colon or rectum. These growths spread very slowly, taking from 10 to 20 years to become cancerous. Once colorectal cancer is diagnosed, the prognosis depends on how far the cancer has spread. Most cases of colorectal cancer occur in people older than 50 years of age. Although colorectal cancer is expected to be responsible for about 56,000 deaths this year, the death rate from this form of cancer has been dropping steadily for the past 20 years. Some researchers speculate that the lowering death rate is due to prevention and early treatment of the disease.

Signs and Symptoms

Unfortunately, most people with colorectal cancer will not begin to experience symptoms until the disease is already at a late stage. In fact, some people may experience no symptoms at all. This is the reason that screening tests, such as a colonoscopy, are so important.

In general, signs and symptoms of colorectal cancer can include the following:

- Changes in bowel habits
- · Blood in the stool
- Problems related to blood loss (anemia, weakness, fatigue, shortness of breath, pounding or

- racing heart, chest pain, and intolerance to exercise)
- Abdominal discomfort (frequent gas, bloating, fullness, cramps, and/or pain)
- Unexplained weight loss
- Pain with defecation
- Stools that are narrower than usual
- Urgent desire to defecate (and the passage of little matter)

#### Causes

Although more than half of all colorectal cancers occur without any clear cause. studies suggest that genetic factors may play an important role in the development of the disease. Those with a family history of specific genetic syndromes, such as familial adenomatous polyposis, Lynch syndrome, juvenile polyposis, and Peutz-Jeghers syndrome are also at an increased risk for developing colorectal cancer. Dietary and lifestyle factors, such as smoking and highfat intake, also influence the development of colorectal cancer. Some researchers speculate that genetic factors predispose a person to colorectal cancer, but that dietary and lifestyle factors play a strong role in determining which "at-risk" individuals go on to develop the disease.

#### Risk Factors

- Family history of colorectal cancer or polyps in the colon
- Older age (more than 50 years)
- Living in an industrialized country like the United States
- Polyps on the inner lining of the colon or rectum
- · African-American descent
- Diets high in meat and low in fruits and vegetables
- Overweight or obesity
- Regular consumption of alcohol
- Smoking cigarettes regularly
- Inflammatory bowel disease (such as Crohn's disease and ulcerative colitis)

## Diagnosis

After obtaining a complete medical history, a healthcare practitioner will perform a physical exam and may order one or more tests to diagnose colorectal cancer. As mentioned in the Preventive Care section, standard tests used to diagnose colorectal cancer include the sigmoidoscopy,

colonoscopy, and barium enema. At the time of either a sigmoidoscopy or a colonscopy, a biopsy (sample of tissue) is removed from the colon or rectum and examined under a microscope in order to detect abnormal growths. If the doctor finds cancer, a series of tests (chest x-ray, abdominal CT scan, and blood tests to check liver function) will be performed to determine if the cancer has spread and to help determine the stage (or extent) of the disease. Stages of colorectal cancer include:

- Stage A—the earliest stage; cancer is found only in the innermost lining of the colon and/or rectum
- Stage B1—involves the muscular part of the colon and/or rectum
- Stage B2 —cancer has spread to deeper layers of the wall of the colon and/or rectum
- Stage C—cancer has spread to nearby lymph nodes but not to other parts of the body
- Stage D—cancer has spread to other parts of the body, such as the liver and lungs

## Preventive Care Screening

Colorectal cancer is highly preventable, even curable, when detected early. Regular screening for colorectal cancer helps detect the presence of polyps before they become cancerous. The following standard screening practices for individuals who are not at high risk for colorectal cancer and who have no symptoms of the disease:

- Annual digital rectal exams starting at age 40—the doctor inserts a lubricated, gloved finger into the rectum to feel for abnormal areas
- Annual fecal occult blood tests starting at age 50—stool samples are tested in the doctor's office for the presence of hidden blood
- Visualization of the colon via one of the following:

Sigmoidoscopy, Colonoscopy and Barium enema are beneficial in every 3 to 5 years starting at age 50 Those with a family history of colorectal cancer should undergo colonoscopy every 3 to 5 years, starting at least 10 years before the age of the relative at the time of his or her diagnosis. Those with a family history of familial

adenomatous polyposis or other similar genetic syndromes should start having colonoscopies at age 10.

#### **Diet and Exercise**

People can also lower their chances of developing colorectal cancer by managing the risk factors they can control, such as diet and exercise. For example, eating plenty of fruits and vegetables as well as foods rich in omega-3 fatty acids and calcium can help reduce the risk of colorectal cancer. Limiting alcohol consumption, quitting smoking, and reducing the intake of high-fat foods, particularly meat, may also protect against the development of the disease. Physical activity is another factor that people can control. Obesity and sedentary lifestyles increase the risk of colorectal cancer and even small amounts of exercise on a regular basis can be helpful. The American Cancer Society recommends at least 30 minutes of physical activity on most days.

#### **Other Preventive Measures**

Aspirin may prevent tumor growth and that estrogen used in hormone replacement therapy may reduce the risk of colorectal cancer in women.

#### **Treatment Approach**

Surgery to remove the tumor is the only way to cure the disease, and early detection is the best preparation for successful treatment. Depending on the stage of the cancer, surgery is generally followed chemotherapy. If the tumor is particularly large, radiation may be necessary before or after surgery. Certain medications and/or supplements may help prevent development of polyps and/or colorectal cancer. Modifying lifestyle, particularly avoiding red meat, losing weight, quitting smoking, and increasing physical activity, may help prevent the disease-even in individuals with a family history of the condition. Omega-3 fatty acids and plant chemicals called lignans found in flaxseed and olive oil show particular promise for reducing the risk of colorectal cancer and preventing the spread of the disease.

#### Lifestyle

An unhealthy lifestyle may increase the risk of colorectal cancer even in people who have no family history of the condition. Some experts believe that adjusting lifestyle habits may decrease the likelihood of

developing colorectal cancer by as much as 70% in some individuals. In addition, even though family history significantly influences an individual's susceptibility to colorectal cancer, lifestyle factors appear to influence which susceptible individuals actually develop the disease. A large, population-based study of men and women in Hawaii found that the following lifestyle factors were linked with colorectal cancer:

- Smoking
- Alcohol consumption
- History of diabetes
- Frequent constipation
- High-calorie diet
- Obesity
- Physical inactivity
  - Low vegetable fiber intake (this association is controversial)
- High levels of insulin (hormone that controls blood sugar levels)
  - Meat consumption

Findings from two very large studies of health professionals have recently supported the association between colorectal cancer and physical inactivity and obesity. Research continues to point to the idea that exercise and low-calorie diets can help to prevent colorectal cancer.

#### Medications

After surgery, chemotherapy may be given to kill any cancerous cells that remain in the body. Chemotherapy controls the spread of the disease and improves survival rates over time. The following chemotherapeutic medications are used alone or in combination to treat colorectal cancer:

- Fluorouracil (5-FU)—often used in combination with leucovorin for 6 months after surgery; reduces the rate of recurrence and improves chances of survival; common side effects include nausea, diarrhea, inflammation of the skin and lining of the mouth, and lowered white blood cell count which increases the chance of developing an infection and anemia
- Leucovorin—a form of folic acid often used in combination with 5-FU; side effects are rare but can include rash, itching, and wheezing include rash.
- Levamisole—can be used in combination with 5-FU; potential

side effects are numerous and include nausea, vomiting, diarrhea, loss of appetite, abdominal pain, lower extremity swelling, insomnia, fatigue, headache, hair loss, dizziness, muscle and joint paints, and depression

For colorectal cancer that has metastasized. or spread, doctors generally use 5-FU in combination with other drugs. One regimen approved by the United States Food and Drug Administration for metastatic colorectal cancer is 5-FU, leucovorin, and irinotecan. With the addition of irinotecan, the progression of the disease significantly slowed and survival improved compared to 5-FU/leucovorin the combinations. However, an unexpectedly high death rate in two recent studies by the National Cancer Institute has brought the addition of irinotecan into question. There are also other medications currently investigation for metastatic colon cancer. Long-term use of aspirin, other nonsteroidal anti-inflammatory drugs (NSAIDs), and hormone replacement therapy have shown promise in the prevention and treatment of colorectal cancer.

- Aspirin—may reduce the risk of polyps and colorectal cancer by up to 44%; further studies are needed
- NSAIDs—reduced the number of polyps by 90% and colon tumors by 55% in animals; studies in humans are needed
- Hormone-replacement therapy (HRT)—over the past 20 years, the rate of death from colorectal cancer among women has decreased far more than the rate among men. Studies suggest that this may be due to the increasing use of hormonereplacement therapy by women after menopause.

Surgery and Other Procedures

Surgery is the treatment of choice for colorectal cancer because it is the only possible cure for the disease. The outlook is best when the disease is detected at an early stage. Before becoming cancerous, polyps can be removed during a colonoscopy. Depending on the severity and location of the cancer, including whether or where it has spread, an individual may need a partial

or total removal of the colon (colectomy) and/or rectum (rectal resection). During surgery, the surgeon also examines other abdominal organs for signs of cancer. If cancer has spread to the liver, a portion of this organ may be removed as well. After removing the tumor and nearby tissue, the surgeon reconnects the healthy portions of the colon or rectum. If the healthy portions of the colon or rectum cannot reconnected, a temporary or permanent opening (stoma) is made through the wall of the abdomen into the colon to provide a new path for waste material to leave the body. This procedure is called a colostomy. Radiation may also be used before or during surgery (called intraoperative radiotherapy) to shrink the tumor, and it may be recommended following surgery for certain stages of colorectal cancer to reduce the risk recurrence. Following colonoscopies are performed every 3 to 6 months for 3 years to detect recurrence.

#### Nutrition and Dietary Supplements Meat and Animal Fat

Diets rich in red meat appear to be linked with increased risk of colorectal cancer. For example, Western countries with high rates of meat consumption, such as Australia and the United States, have particularly high rates of colorectal cancer. It may be related to overall intake of animal fat and protein. Interestingly, sources of animal fat and protein other than red meat-such as dairy fish, and poultry-were products, associated with an increased risk for the condition. The researchers suggest that red meat, in particular, is detrimental to the colon. One theory scientists have offered is that the high amount of iron found in meat (and subsequently concentrated in the feces of those who eat meat) boosts levels of free radicals in the colon. Free radicals are substances that cause damage to cells and increase the risk of developing cancer. Another theory is that there are a lot of cancer-causing substances in meat. Further research is necessary to determine what element of red meat contributes to the development of colorectal cancer. Until more information becomes available, it is best for people with colorectal cancer to avoid eating red meat.

#### **Polyunsaturated Fatty Acids**

Some experts believe that omega-3 fatty acids may prove to be valuable in preventing colon cancer or treating it in its early stages, but not in later stages when the cancer has spread to other parts of the body. Studies in animals show that diets rich in omega-6 fatty acids may promote growth of colon tumors, whereas diets high in omega-3 fatty acids inhibit the growth of such tumors. Diets in certain Western countries, such as the United States, significantly favor omega-6 fatty acids over omega-3 fatty acids, at a ratio of about 20:1. The balance for optimum health and disease prevention is 2:1. The results of laboratory, animal, and suggest that population-based studies enriching the diet with omega-3 fatty acids may help protect against colorectal cancer specifically. Similarly, patients with polyps and early signs of cancerous changes in the colon found that their abnormal cellular changes returned to normal after consuming omega-3 fatty acids in the form of EPA and DHA (both of which come from coldwater fish or fish oil capsules).

Studies reporting on the value of a highfiber diet for colorectal cancer are somewhat conflicting. Fiber protects against colorectal cancer, most large clinical studies have shown a minimal association, at best, between fiber intake and decreased risk of colorectal cancer.

#### Lignans

Lignans are plant chemicals found in fruits, vegetables, and cereals, and in high concentrations in olive oil and flaxseed. Laboratory studies suggest that lignans slow growth of colon tumor cells, although the mechanism for this action is unclear.

#### Olive Oil

A review of studies from 28 countries and four continents suggests that higher olive oil intake is linked with decreased incidence of colorectal cancer. Olive oil appears to decrease the amount of deoxycyclic acid in the colon and rectum. In addition, olive oil is a monounsaturated fat that is low in omega-6 fatty acids, so it also improves the omega-6 to omega-3 ratio in the body. Extra virgin olive oil is rich in antioxidants, including flavonoids and lignans, which help prevent age-related damage to cells. Lignans in particular, but also other antioxidants in olive oil, may be protective against colorectal cancer.

#### Flaxseed

Flaxseed is the richest source of lignan precursors for mammals. Flaxseed and flaxseed oils significantly reduced the number of abnormal cell growths-early markers of colon cancer—in the colons of rats. Further studies are needed to determine whether flaxseed offers such protective effects against colorectal cancer in humans

#### Calcium

Although some studies are conflicting. mounting evidence suggests that calcium may help protect against colorectal cancer. For example, population-based studies have found that people who consume high amounts of calcium, vitamin D, and milk in their diets are significantly less likely to develop colorectal cancer than those who consume low amounts of the same substances. Other studies have suggested that calcium and vitamin D supplements decrease the risk of colorectal cancer in both men and women. Although it is best to obtain calcium and vitamin D from the diet, the suggested amounts for the prevention and treatment of colorectal cancer (800 IU/day of vitamin D and 1800 mg/day of calcium) will most likely require supplementation.

#### **Folate**

Folate (vitamin B9), a nutrient found in both vegetables and fruit, appears to protect development of against the Although it is not clear how this works, some researchers speculate that folate keeps DNA (the genetic material in cells) healthy and prevents mutations that can lead to cancer. Population-based studies have found that colorectal cancer is less common among individuals with very high dietary intakes of folate. Conversely, low folate intake increases risk of benign colorectal tumors as well as cancer. To have a significant effect on reducing the risk of colorectal cancer, it appears that at least 400 mcg of folate per day for at least 15 years is required.

#### Antioxidants

In fact, diets rich in fruits and vegetables are believed to protect against a variety of cancers. Fruits and vegetables are rich in vitamins (such as folate) and antioxidants (such as vitamins A, C, E, lutein, and lycopene). Some convincing populationbased studies have found that diets rich in lutein (found in spinach, broccoli, and lettuce) and lycopene (found in tomatoes) may lower the risk of developing colorectal cancer. More research would be helpful in determining how antioxidants reduce the risk of colorectal cancer as well as the precise amount of antioxidants necessary to lower the risk of developing the disease.

Selenium, another important antioxidant, may also help prevent colorectal cancer. Studies examining whether selenium protects against skin cancer have found that people who take the supplement are also significantly less likely to develop colorectal cancer than those who do not take the supplement.

#### Sov

Genistein, an isoflavone derived from soy, has demonstrated anticancer effects in laboratory studies, including against colon cancer cells. However, animal studies to date have been conflicting, with some suggesting that genistein may boost tumor growth in the colon. Most medical experts agree that the evidence for the anticancer effects of soy is weak thus far, and that further research is necessary before conclusions can be drawn and decisions made regarding isoflavones and cancer.

#### Herbs

## Green Tea (Camellia sinensis)

The cancer-protective effects of green tea have been reported in several populationbased and animal studies. Green tea contains chemicals called polyphenols that act as powerful antioxidants and have been shown to help prevent cancer. However, studies on the effects of green tea on colon or rectal cancer have produced conflicting results. Some studies show decreased risk in those who drink the tea, while others show increased risk. Further research is needed before green tea can be recommended for the prevention of colorectal cancer. The following herbs may prove helpful in protecting against the development and spread of colorectal cancer:

- Gold thread (Coptis trifolia)
- Skullcap (Scutellaria lateriflora)

- Lemon grass (Cymbopogon citratus)
- Garlic (Allium sativum)
- Curcumin (Curcuma longa)

#### Acupuncture

While acupuncture is not used treatment itself. for cancer evidence suggests it can be a valuable therapy for cancer-related symptoms (particularly nausea and vomiting that often accompanies chemotherapy treatment). There have also been studies indicating that acupuncture may help reduce pain and shortness of breath. Acupressure has also proved useful in controlling breathlessness; this is a technique that patients can learn and then use to treat them.

#### Mind/Body Medicine

Relaxation techniques are beneficial for individuals undergoing surgery. In one study it was observed that patients who received standard care plus relaxation techniques in the form of guided imagery audiotapes before, during, and after surgery experienced significantly better sleep and less pain following the surgery than patients who received only standard care.

## Other Considerations Pregnancy

Colorectal cancer may be detected late in pregnant women because symptoms of the disease, such as rectal bleeding, nausea, and vomiting, resemble the symptoms of pregnancy. Pregnant women should avoid chemotherapy and radiation therapy. Surgery puts the fetus at risk, therefore folic acid and nutritional needs are usually maintained during pregnancy and treatment is postponed until after the baby is delivered.

## **Prognosis and Complications**

after treatment cares Follow-up for colorectal cancer is very important. If the cancer returns or if new cancer develops, it should be treated as soon as possible. If left untreated, colorectal cancer can spread to the liver or lungs or a tumor may block the colon. In some cases, individuals with colorectal cancer may need to have their entire colon or rectum removed. If the surgeon cannot reconnect healthy portions of the colon or rectum, a temporary or permanent surgical opening (stoma) is made through the wall of the abdomen into the colon to provide a new path for waste material to leave the body. After this procedure, a special bag is worn to collect body waste. Individuals who wear the bag may need counseling on how to care for the stoma as well as how to deal with the emotional difficulties associated with this procedure. The outlook in cases of colorectal cancer depends on how deeply the tumor has penetrated into the tissue and whether the cancer has spread to lymph nodes in the abdominal region or to other

areas of the body. Following are the proportions of individuals who survive at least 5 years based on the stage of their disease when it was first diagnosed:

- Stage A—more than 90%
- Stages B1 and B2—85%
- Stage C—70% to 80%
- Stage D—5%

## 35. Common Cold; Cold; Respiratory Infection, Cold

The common cold is an upper respiratory infection caused by a virus. Adults have between 3 and 6 colds a year, and children have as many as 8 to 10.

## Signs and Symptoms

- Sneezing and runny nose from nasal congestion
- Sore throat
- Cough
- Hoarseness
- Fever (102 F or lower)
- Headache

#### Causes

More than 200 different types of viruses cause colds. A cold by touching a person with a cold and then touching nose or eyes. Colds are also transmitted through the air. Exposure to cold outdoor air and fatigue do not make you more likely to get a cold, although psychological stress may.

#### **Risk Factors**

People more likely to get colds include:

- Children and those over 65
- Children who have parents who smoke
- Children who attend day care
- Smokers and those exposed to second hand smoke
- Those exposed to industrial smoke, toxic fumes, or other air pollutants
- People with immune system disorders, like HIV, AIDS, or cancer, or compromised immune function, like those taking steroids for a long time
- People under a fair amount of stress

Diagnosis

The diagnosis will be made based on symptoms and exam. Tests are not necessary. Colds generally go away on their

own after about 7 to 10 days. An underlying lung condition, however, like asthma or emphysema, should let doctor know right away when get a cold.

#### **Preventive Care**

Although anyone and everyone can get a cold, there are a few things that you can do that may help improve your immune system and make you less susceptible to getting colds:

- Exercise regularly
- Eat a proper diet rich in fruits and vegetables and low in fat
- Get sufficient rest at all times
- Minimize your stress and your reaction to stress. Consider yoga, tai chi, or other forms of relaxation on an ongoing basis.
- Wash your hands frequently, especially after coming into contact with someone who has a cold.

**Treatment Approach** 

With a cold, the goal of treatment is to improve your symptoms as quickly as possible. With that said, even if you do nothing, they should go away within 10 days. Antibiotics and antihistamines cannot help cure cold. There are medications; herbs Supplements, and homeopathic remedies that may make feel better while have a cold.

Drink a lot of water to help loosen

Rest to restore your energy and avoid complications from the cold like bronchitis or pneumonia.

 Eat a diet rich in fresh fruits and vegetables. These foods provide lots of antioxidants, especially vitamins A and C.

## Medications

- Decongestants: may help prevent sinus and ear infections. Do not take if you have a heart condition or high blood pressure.
- Nasal sprays: Use only for the recommended amount of time
- Aspirin and other pain relievers (like acetominophen or ibuprofen) can be used for fever or aches. Take only if necessary. Do not give aspirin to children under 18 because of the risk of Reye's syndrome

## Nutrition and Dietary Supplements Lactobacillus acidophilus

Lactobacillus is a probiotic, which means that it is an organism that actually helps fight, rather than cause, infection. Studies have been quite promising in terms of the ability of lactobacillus supplements or lactobacillus in certain milk and yogurt products to help reduce the likelihood of getting a respiratory infection, like a cold, even in children.

#### Vitamin C

Vitamin C can cure the common cold; the scientific evidence supporting this idea is limited. There have been a few studies suggesting that taking large doses of vitamin C supplements at the onset of cold or flu symptoms, or just after exposure to someone with one of these ailments, can shorten the duration of cold or ward it off altogether.

#### Zinc

Zinc supplementation enhances immune system activity and protects against a range of infections including colds and upper respiratory infections. Several important studies have revealed that zinc lozenges may reduce the intensity of the symptoms associated with a cold, particularly cough, and the length of time that a cold lingers. Similarly, nasal zinc gel seems to shorten the duration of a cold.

## Herbs

## Astragalus (Astragalus membranaceus)

Astragalus has been used traditionally to enhance the immune system, including possibly preventing and treating colds and flus. Some practitioners claim that this herb shortens the duration of colds, although science has not proven this. Astragalus

should not be used if you are taking certain medications for HIV or other viruses.

#### Celery seed (Apium graveolens)

Celery seed is one of the lesser-known herbs in Western herbal medicine. In other parts of the world, however, it has been used for thousands of years for a variety of reasons including by Ayurvedic physicians to treat colds and flus.

#### Echinacea (Echinacea purpurea)

Echinacea is primarily used to shorten the duration of the common cold and the flu and to alleviate the symptoms associated with them, such as pharyngitis, cough, and fever. Although the data in the medical literature goes back and forth somewhat, certain scientific studies do support that Echinacea will have this effect if you start taking it soon after your cold symptoms begin. In other words, to date, research suggests that this herb does not help prevent colds and flus, but it does support that it helps treat them if taken early enough.

#### Eucalyptus (Eucalyptus globulus)

Eucalyptus is commonly used in remedies to treat the common cold and its symptoms, particularly cough. It can be found in many lozenges, cough syrups, and vapor baths. Herbalists recommend the use of fresh leaves in teas and gargles to soothe sore throats. Ointments containing eucalyptus leaves are also applied to the nose and chest to relieve congestion. Eucalyptus oil helps loosen phlegm, so many herbal practitioners recommend inhaling eucalyptus vapors to help treat coughs and the flu.

## Garlic (Allium sativum)

Garlic has been used as both food and medicine in many cultures for thousands of years, dating as far back as the time that the Egyptian pyramids were built. Today, garlic is used for many health related purposes including trying to reduce symptoms from a cold, such as cough. The use of garlic may be in preventing and treating colds. The people who participated in this research trial received either garlic supplements or placebo for 12 weeks during "cold season". Those who received the garlic significantly fewer colds than those who received placebo. Plus, when faced with a cold, the symptoms lasted a much shorter time in those receiving garlic compared to those receiving placebo.

#### German Chamomile (Matricaria recutita)

Chamomile has been used to treat a variety of symptoms related to colds including chest and nasal congestion as well as sore throats.

## Goldenrod (Solidago virgaurea)

Herbalists for a wide range of health problems including colds and flus use goldenrod.

#### Goldenseal (Hydrastis canadensis)

Goldenseal is often combined with echinacea in preparations designed to strengthen the immune system. Many professional herbalists recommend goldenseal in herbal remedies for hay fever (also called allergic rhinitis), colds, and flu. Goldenseal has not been thoroughly investigated in scientific studies, however.

#### Licorice (Glycyrrhiza glabra)

Licorice root has been used in both Eastern and Western medicine to treat a variety of illnesses including the common cold, cough, and sore throat. It is important to note, however, that people who regularly consume large amounts of licorice (more than 20 g/day) may inadvertently raise blood levels of the hormone aldosterone, which can cause serious side effects including headache, high blood pressure, and heart problems.

## Linden (Tilia spp.)

Linden is used in many cough and cold remedies. Active ingredients in linden help promote sweating, which may be helpful if you have a fever.

#### Marshmallow (Althea officinalis)

Although science hasn't tested this traditional use, professional herbalists may recommend marshmallow for cold, cough, and sore throat.

## Peppermint (Mentha x piperita)

Peppermint is widely used for cold symptoms. This is because peppermint and its main active agent, menthol, are effective decongestants. Menthol also thins mucus and, therefore, works as a good expectorant, meaning that it helps loosen and break up coughs with phlegm. It is soothing and calming for sore throats (pharyngitis) and dry coughs as well.

## Siberian ginseng (Eleutherococcus senticosus/Acanthopanax senticosus)

Siberian ginseng may help the body deal with physically and mentally stressful exposures such as viruses that cause the common cold. By strengthening your

system, it may, in theory, also help prevent illness. Patients who received Siberian ginseng extract had improvements in a number of measures that reflect the functioning of the immune system. Also, in laboratory studies, an extract of Siberian ginseng slowed the replication of certain viruses, including influenza an as well as human rhinovirus and respiratory syncytial virus.

## Wild yam (Dioscorea villosa)

Although not studied scientifically, wild yam has been used traditionally in the Amazon and in Central America to treat a variety of conditions including fever and colds.

#### Yarrow (Achillea millefolium)

There has been very little research on yarrow's medicinal properties. Clinical experience, however, supports the use of yarrow for colds and fever. It seems to bring down body temperature by promoting perspiration.

#### Homeopathy

- Aconitum -- for symptoms including fever, anxiety, and thirst, that start abruptly, often following exposure to a cold climate or draft; most effective during the first 24 hours of the illness
- Allium cepa -- for colds with clear watery discharge that burns and/or irritates the nostrils; red, burning eyes; and symptoms that worsen in warm rooms and in the evening
- Arsenicum album -- for colds with watery, burning discharge from the eyes and nose, throbbing headache, nasal congestion that is not relieved by sneezing, dry mouth, sensitivity to cold, and a thirst for small sips of fluid
- Belladonna -- for colds with sudden onset of high fever, flushed face, watery nasal discharge, sore throat, throbbing headache, earache, and cough that tends to worsen at night; this remedy is most appropriate for individuals who are often agitated and sometimes delirious; these symptoms may cause children to
- Bryonia -- for chest colds with spastic cough that produces only a

small amount of mucus and sharp chest pain that worsens with inhalation and while coughing; a dull headache, little to no nasal discharge, and sneezing may also be present

- Euphrasia -- for colds with excessive, non-irritating watery discharge that tends to worsen in the morning and when the person is lying down
- Ferrum phosphoricum -- for the early stages of a cold with slight fever, flushed face (redness may be patchy), and fatigue; may also be used in children with nosebleeds or bloody nasal discharge
- Gelsemium -- for colds that have gradual onset with watery nasal discharge that causes irritation, a feeling of fullness or tickling in the nose and/or the back of the throat, muscle aches, fatigue, lack of energy, lightheadedness or spaciness, and a headache with pain in the back of the head
- Hepar sulphuricum -- for late stages
   of a cold when nasal discharge turns
   from watery to thick, yellow, and
   foul smelling; symptoms tend to
   worsen in the evening and with cold
   and wind
- Mercurius -- for fluctuating body temperature and thick, yellow nasal discharge with a foul odor; symptoms may also include bad breath and a swollen tongue
- Pulsatilla -- for coughs and nasal congestion with thick, yellow-green mucus that does not burn the skin; symptoms tend to worsen in warm, stuffy rooms and when the person is lying on his or her back; this remedy is most appropriate for

children (even newborns) and adults who are weepy, have mood swings, and are easily influenced by others

#### Mind/Body Medicine

Practicing relaxation techniques on a regular basis may help reduce the number of days that you have a cold or the flu. A similar study using relaxation techniques and guided imagery reached the same conclusion for a group of 45 children. Some good stress reduction techniques include meditation, deep relaxation, yoga, tai chi, and breathing exercises.

#### **Other Considerations Pregnancy**

Some medications, herbs, and supplements may be harmful to the fetus and should, therefore, not be taken if you are pregnant or trying to become pregnant.

#### **Special Populations**

If you have asthma, emphysema, or any other underlying respiratory disorder, you should talk to doctor as soon as you develop cold symptoms.

#### Warnings and Precautions

If your symptoms have not resolved in 7 to 10 days, you should call your doctor. Other reasons to see your physician include high fever (above 102°F), thick, green nasal discharge, or development of a productive cough, especially if it is thick and green as well.

## **Prognosis and Complications**

Generally, as stated earlier, colds resolve (on their own) in 7 to 10 days. Some potential complications from colds include:

- Worsening of a pre-existing respiratory condition, such as asthma or emphysema
- Bronchitis
- Pneumonia
- Ear infection
- Sinusitis

## 36. Congestive Heart Failure; Heart Failure, Congestive

Heart failure does not actually mean that your heart has failed or stopped beating. It means that your heart, which is a muscle that pumps blood to all parts of your body, is not working as well as it should be. As your heart's pumping action lessens, blood may back up in your lungs, liver, or legs.

This can cause shortness of breath, leg swelling, and other problems. In addition, organs in your body may not get the oxygen and nutrients they need, reducing their ability to function properly.

#### Signs and Symptoms

You may experience one or more of the following if your heart is failing:

- Swollen feet, ankles, and possibly abdomen
- Weight gain
- · Shortness of breath and cough
- Racing or skipping heart beat (palpitations)
- Indigestion, nausea and vomiting, and loss of appetite
- Difficulty sleeping
- Fatigue, weakness, and exercise intolerance
- Lightheadedness
- Diminished concentration and level of alertness
- Changes in urination like needing to urinate at night (nocturia). If you have decreased urine production (oliguria), this is often a sign that your kidneys are failing.

#### Causes

The most common causes of heart failure are high blood pressure and coronary artery disease. Other causes of heart failure include:

- Valvular abnormalities (valves separate the chambers of the heart)
- Congenital heart disease (heart defects with which one may be born)
- Cardiomyopathy (weakening of the heart muscle, which may be from infection, nutritional deficiencies, or many other possible causes)
  - Lung disease
  - Heart tumor

#### **Risk Factors**

- Have had a heart attack or have heart disease of any kind.
- Have high blood pressure or diabetes.
- · Are obese.
- Abuse alcohol, smoke cigarettes, or use cocaine.

#### Diagnosis

Usually diagnose heart failure based on the history and your physical exam. He or she will focus attention on examination of your heart and lungs, checking for enlargement of the former and fluid in the latter. Other signs of heart failure that the doctor will

look for include distended neck veins, swelling in your legs or abdomen, and tenderness of the liver. A chest x-ray can help to see if there is fluid on your lungs or enlargement of your heart – two factors that often go along with CHF. After the initial diagnosis, physician will focus on identifying the cause and precipitating factors for CHF. This is especially important if the underlying cause is treatable. Procedures include blood tests, chest x-ray, electrocardiograms (ECG), and an echocardiogram to test heart function by observing and measuring how well the heart muscle pumps.

## Treatment Approach

#### Lifestyle

Carefully monitoring yourself and helping to manage your condition makes a big difference in keeping CHF under control and feeling good. To do this, track your weight on a daily basis. Weight gain can be a sign that you are retaining fluid and that the pump function of your heart is worsening. Make sure you weigh yourself at the same time each day and on the same scale, with little to no clothes on.

## Other important measures include:

- Take medications as directed. Carry a list of medications with you wherever you go.
- Limit salt and sodium intake.
- · Don't smoke.
- Stay active. For example, walk or ride a stationary bicycle. Doctor can provide a safe and effective exercise plan based on degree of heart failure and how well you do on tests that check the strength and function of heart. DO NOT exercise on days that your weight has gone up from fluid retention or you are not feeling well.
- Lose weight if you are overweight.
- Get enough rest, including after exercise, eating, or other activities. This allows your heart to rest as well. Keep your feet elevated to decrease swelling.

## Tips to lower your salt and sodium intake

• Look for foods that are labeled "low-sodium," "sodium-free," "no salt added," or "unsalted." Check the total sodium content on food

labels. Be especially careful of canned, packaged, and frozen foods. A nutritionist can teach you how to understand these labels.

- Don't cook with salt or add salt to what you are eating. Try pepper, garlic, lemon, or other spices for flavor instead. Be careful of packaged spice blends as these often contain salt or salt products (like monosodium glutamate, MSG).
- Avoid foods that are naturally high in sodium, like anchovies, meats (particularly cured meats, bacon, hot dogs, sausage, bologna, ham, and salami), nuts, olives, pickles, sauerkraut, soy and Worcestershire sauces, tomato and other vegetable juices, and cheese.
- Take care when eating out. Stick to steam, grilled, baked, boiled, and broiled foods with no added salt, sauce, or cheese.
- Use oil and vinegar, rather than bottled dressings, on salads.
- Eat fresh fruit or sorbet when having dessert.

#### Medications

- Vasodilators—open up blood vessels; cornerstone of treatment; for example, angiotensin-converting enzyme (ACE) inhibitors; side effects include kidney failure, cough, low blood pressure
- Diuretics—main types of diuretics include thiazide, loop diuretics, and potassium-sparing diuretics; help rid your body of fluid and sodium
- Digitalis glycosides—increase the ability of the heart muscle to contract properly; prevent heart rhythm disturbances

## **Nutrition and Dietary Supplements Carnitine**

L-carnitine supplements may reduce chances of developing heart failure after a heart attack and improve exercise capacity. Carnitine is a nutrient that helps the body convert fatty acids into energy. This energy, in turn, is used primarily for muscular activities throughout the body.

## Coenzyme Q-10 (CoQ10)

Levels of CoQ10 are low in people with CHF. Several research studies suggest that CoQ10 supplements can help reduce swelling in the legs, enhance breathing by reducing fluid in the lungs, and increase exercise capacity in people with CHF. CoQ10 supplements do not contribute any benefit beyond the effects of standard treatment for CHF. More conclusive research will help resolve the debate.

#### Creatine

Creatine is a naturally occurring amino acid found mainly in muscles. Fifty percent of creatine in our bodies is ingested through the foods we eat while the other 50% is made in the liver, kidney, and pancreas. Creatine supplements have gained much popularity in recent years, particularly among body builders and competitive athletes.

#### Magnesium

Magnesium is essential to heart health. This mineral is particularly important for maintaining a normal heart rhythm and is often used by physicians to treat irregular heartbeat (arrythmia).

#### **Omega-3 Fatty Acids**

Omega-3 fatty acids, particularly in the form of dietary fish, may help reduce the risk of irregular heart rhythms from CHF. Omega-3 fatty acids may also improve certain factors, like high blood pressure, that increase chances of developing CHF.

#### Selenium

Low blood levels of selenium may contribute to heart failure. It is not known, however, whether selenium supplementation can help treat CHF or not.

## Vitamin B1 (Thiamine)

First, low levels of thiamine can contribute to the development of congestive heart failure (CHF). On the flip side, people with severe heart failure can lose a significant amount of weight including muscle mass (called wasting or cachexia) and become deficient in many nutrients including thiamine. In addition, diuretics, which are frequently prescribed for CHF, can deplete thiamine levels. For those with low levels of this vitamin, taking a thiamine supplement may be very important for treating CHF. Eating a balanced diet, including vitamin B1, and avoiding things that deplete this nutrient, such as high amounts of sugar and

alcohol, seems prudent for anyone with CHF or its risk factors.

#### Herbs

#### Berberine

Berberine, an active ingredient of goldenseal, can dilate blood vessels. Therefore, it may prove useful in the treatment of certain causes of both irregular heartbeat and heart failure. Berberine may improve heart function and exercise capacity as well as reduce shortness of breath, fatigue, and irregular heartbeats.

#### Hawthorn

Hawthorn (*Crataegus species*), a member of the rose family, was recognized by physicians in the early 1800s for its ability to treat disorders related to circulation and respiration. Considered a "cardiotonic" herb, the flowers and berries of the hawthorn plant have been used in traditional medicine to treat irregular heartbeat, high blood pressure, chest pain, atherosclerosis, and congestive heart failure. Hawthorn extract may even prove to be as effective as low

doses of ACE inhibitors in improving symptoms of congestive heart failure.

#### Acupuncture

Acupuncture can reduce the response to mental stress in people with heart failure. In theory, this control of one's reaction to stress might translate into reduced blood pressure and heart rate, which would, if this proves to be true, decrease the workload on your heart.

### **Prognosis and Complications**

Heart failure is a serious disorder that carries a reduced life expectancy. It is generally a chronic illness, but many forms can be controlled with correction of the underlying disorder, lifestyle change, and medication. Potential complications include pulmonary edema, Total failure of the heart to function, Arrhythmias including fatal arrhythmias, and Side effects of medications including muscle cramps, cough, gastrointestinal upset, low blood pressure, light-headedness, or even fainting.

## 37. Conjunctivitis; Pink Eye

Conjunctivitis is an inflammation of the membrane covering the inside of your eyelids and the outer part of eyeball. Commonly called "pink eye," conjunctivitis is generally not serious but can be highly contagious.

#### Signs and Symptoms

Conjunctivitis causes the following symptoms in one or both eyes.

- Redness
- Itching
- Tearing
- Discharge (watery or thick)
- Crust that forms overnight
- Sensitivity to light
- Gritty feeling

#### What Causes It?

Conjunctivitis is most often the result of viruses, like those that cause the common cold. Bacterial infections, allergies, chemicals, and irritation can also cause conjunctivitis from contact lenses, or eye injury. Viral and bacterial conjunctivitis are very contagious.

#### What to be done

If both eyes are affected, with itching and a clear discharge, it's likely that allergies are the cause. Swollen glands usually indicate a virus, and a thick, crusty discharge is a sign of a bacterial infection. Use a lamp for closer examination, or gently swab a stain across the surface of eye. Vision test or measure the pressure in eye, to rule out glaucoma.

#### **Treatment Options**

Chronic conjunctivitis, left untreated, can cause permanent eye damage. Treatment varies according to the cause of inflammation. Bacterial conjunctivitis is generally treated with antibiotics. Forms of conjunctivitis caused by viruses do not respond to antibiotics, but antihistamines and anti-inflammatory medications may help relieve your symptoms. Cool compresses may help to reduce itching and swelling.

## Drug Therapies

• Viral conjunctivitis: Cool compresses three times daily for 1 to 3 weeks; may also use antihistamines to relieve inflammation. Trifluridine 1% drops, every 2 hours. Oral and/or

topical acyclovir may also be needed.

- Allergic conjunctivitis: Avoid contact with allergen. Treat with cool compresses, over-the-counter or topical antihistamines, NSAIDs (particularly ketorolac), and possibly mild corticosteroids.
- Bacterial conjunctivitis: trimethoprim sulfate and polymixin B sulfate drops, 1 drop 3 times daily for one week, or polymixin B-bacitracin ointment. Fluoroquinolones as second-line therapy. Tobramycin (0.3%) or gentamicin as drops, or 10% sodium sulfacetamide as drops, every four hours.

## Complementary and Alternative Therapies Nutrition

Doses listed are for adults. Decrease by one-half to two-thirds for children, at the recommendation of a physician. Vitamin A (10,000 IU per day), vitamin C (250 to 500 mg two times per day), and zinc (30 to 50 mg per day) strengthen your immune system and help you heal faster.

#### Herbs

- Eyebright (Euphrasia officinalis): helps fight infection and dry up excess fluid, specific for eyes
- Chamomile (Matricaria recutita): helps fight infection
- Fennel seed (Foeniculum vulgare): helps fight infection
- Marigold (Calendula officinalis): soothes irritation
- Plantain (*Plantago lanceolata*, *P. major*): astringent and soothing.
   The fresh leaves are the most effective plant part.
- Flaxseed (Linum usitat issimum): as

   a soothing poultice made with 1 oz.
   of bruised flaxseed steeped for 15 minutes in 4 oz. of water, wrapped in cheesecloth, then applied directly to the affected eye.
- Grated fresh potato has astringent (drying and disinfecting) properties.
   Wrap in cheesecloth and apply.

Use above herbs singly or in combination: Mix equal parts together then steep 1 tsp. herb in 1 cup of hot water to make a tea. Cool before administering to the eye.

Eyewash: goldenseal (Hydrastis canadensis) and boric acid: 10 drops of goldenseal tincture with I tsp. of boric acid in 1 cup of water.

### Homeopathy

- Euphrasia -- for conjunctivitis with large volumes of watery tears that burn the face and may in time become a thick discharge; despite the production of watery tears, the individual complains of a dry, gritty sensation in the eyes
- Argentum nitricum -- for red, swollen eyes with pus-like discharge and splintering pains
- Pulsatilla -- for conjunctivitis with yellow-green discharge and itchy eyes that may accompany or immediately follow a cold; the eyelids tend to stick together and symptoms generally improve with cold compresses; this remedy is most appropriate for individuals who tend to be irritable and have mood swings
- Belladonna -- for the first stages of conjunctivitis including the sudden onset of burning, bloodshot eyes, swollen eyelids, and hypersensitivity to light; the eyes are generally hot and throbbing to the touch
- Sulphur -- for burning, pain, and redness of the eyes accompanied by a yellow discharge with foul odor; the eyes are often crusted together and the individual is usually very hot and thirsty
- Apis mellifica -- for red, burning eyes and excessive swelling that feel better with cold applications

#### Acupuncture

Treatment may be administered for pain relief and relieving congestion.

#### Follow up

Viral and bacterial conjunctivitis are both very contagious. Family members should use separate towels. Wash your hands often. Children should generally be kept home from school and day care. Be sure to follow your physician's advice about using any medications, particularly if you have been given antibiotics or corticosteroids. If you wear contact lenses, keep them clean to

avoid further irritation and future infections. Do not wear them until your eyes have healed. People with allergy-related conjunctivitis sometimes develop a severe form with a stringy discharge, swollen eyelids, scaly skin, and significant discomfort. This needs aggressive treatment to prevent scarring of the cornea.

## 38. Constipation

The term constipation can mean infrequent or hard stools, or it can refer to difficulty passing stools. In other words, constipation may involve pain during the passage of a bowel movement, the inability to pass a bowel movement after straining or pushing for longer than 10 minutes, or no bowel movements for more than 3 days. Since normal bowel patterns vary considerably from person to person, constipation is a relative term. Similarly, stool consistency can vary widely and still be normal. Some healthy people generally have soft or near-runny stools, while others have firm stools, but no difficulty in passing them.

#### Signs and Symptoms

- · Infrequent, difficult passage of stools (fewer than three bowel movements a week)
  - Sudden decrease in frequency of bowel movements
  - Stools harder than normal
  - Bowel still feels full after bowel movement
  - Bloated sensation

#### Causes

Constipation is most often caused by a lowfiber diet, lack of physical activity, inadequate intake of fluid each day, or delay in going to the bathroom when urge to defecate. Stress and travel can contribute to constipation or other changes in bowel habits. Other times, diseases of the bowel, pregnancy, certain medical mental health conditions, problems. neurological diseases, or medications may be the reason for constipation. More serious causes, like colon cancer, are much less common. Constipation in children often occurs if they hold back bowel movements when they aren't ready for toilet training or are afraid of it.

### Diagnosis

As part of the history, the doctor will ask a series of questions such as:

- How long have you constipation?
- How many days between two bowel movements?
- Is your constipation worse when you are stressed?
- What are the color, shape, and consistency of the stools?
- Do you have any bleeding with bowel movements?
- Do you have any abdominal pain?
- What surgeries or injuries have you had?
- What medications do you take?
- · Do you drink coffee or drink alcohol? Do you smoke?
- What other symptoms are also present?

The following tests may help diagnose the cause of constipation:

- Blood tests such as a CBC, PT, or
- Stool studies
- X-rays of the abdomen
- Upper GI series (to look at the esophagus, stomach, and upper part of the small intestines)
- Barium enema (to look at the colon)
- Proctosigmoidoscopy examination of the lower bowel) or, depending on the symptoms a colonoscopy (an examimation of the entire colon from the inside)

#### **Preventive Care**

- Avoiding constipation altogether is easier than treating it, but involves the same lifestyle measures:
  - Eat lots of fiber.
- Drink plenty of fluids each day (at least 8 glasses of water per day).
  - · Exercise regularly.
- Go to the bathroom when you have the urge. Don't wait.

## Treatment Approach

Chronic constipation can usually be prevented or treated with a combination of dietary changes, extra fluid intake, exercise, and, when necessary, short-term use of a laxative. Talk with you about proper bowel habits (consistent, unhurried elimination practices). He or she may have you use a laxative or stool softener over the short term or suggest a bulk-forming agent, such as psyllium, bran, or methylcellulose. In addition, certain herbs may help promote bowel activity. Use laxative herbs with caution because, like medications, they may become less effective with habitual use.

#### Lifestyle

Children and adults should make sure they get enough fiber in their diet. Vegetables, fresh fruits (especially dried fruits) and whole wheat, bran, or oatmeal cereals are excellent sources of fiber. To reap the benefits of fiber, you must drink plenty of fluids (especially water) to help pass the Regular exercise is also very important in establishing regular bowel movements. Even if you are confined to a change bed, wheelchair or perform abdominal frequently and contraction exercises and leg raises. A physical therapist can recommend exercises appropriate program of physical abilities. Additional tips include:

- Take time to eat, breathe slowly, and chew food thoroughly.
- Eat smaller, more frequent meals and avoid overeating at one sitting.
- Drink warm lemon water just before meals to stimulate digestion.
- Try eating stewed or soaked prunes each day.

#### Medications

Stool softeners (such as those containing docusate sodium) may help. Additionally, bulk laxatives such as Psyllium may help add fluid and bulk to the stool. Suppositories or gentle laxatives, such as mineral oil or milk of magnesia, may be used to establish regular bowel movements. Enemas or laxatives should be reserved for severe cases only. In addition, laxatives should not be used over a long period of time because you can become dependent on them. DO NOT give laxatives or enemas to children without specific instruction from a

doctor. People who have any degree of bowel obstruction, abdominal inflammation, or kidney or heart failure should NOT take over the counter laxatives.

#### **Nutrition and Dietary Supplements** Fiber

Fiber relieves constipation by adding bulk to stool and speeding its transit through the digestive tract. Psyllium is an example of a soluble fiber used standard as a laxative in Asia, Europe, and North America.

#### Herbs

## Aloe (Aloe vera/Aloe barbadensis/Aloe ferox)

Aloe juice is a yellow, bitter liquid derived from the outer layer of the aloe leaf. It contains substances that, when taken by mouth, have very strong laxative effects. Although aloe latex is a powerful laxative, it is not used frequently because it can cause painful cramping. Other gentler, herbal laxatives from the same plant family as aloe (such as cascara and senna) are generally recommended first.

#### Others

Since there has been little research regarding these herbs for constipation or other digestive disorders, it is particularly important to check about safety.

- Burdock root (Arctium lappa/Arctium minus/Arctium tomentosum)
- Dandelion (Taraxacum officinale)
- Dong quai (Angelica sinensis)
- Flaxseed (Linum usitatissimum)
- Ginger (Zingiber officinale)

## Homeopathy

- for carbonica Calcarea constipation without the urge to have a bowel movement; children who often feel better when constipated rather than when bowel habits are normal; this remedy is most appropriate for individuals who tend to be overweight, lack stamina, experience heartburn, and produce sour-smelling belches; the individual may also suffer from pica (a craving for something not normally considered nutritional, such as dirt, clay, or chalk) and milk sensitivity.
- Nux vomica -- for constipation accompanied by a constant urge to

move the bowels, but with little success; or for constipation associated with overeating, alcohol, or drug use; this remedy is most appropriate for individuals who tend to be sensitive to noise, odors, and light

- Silica -- for constipation with the sensation that stool remains in the rectum after bowel movements; children for whom this remedy is appropriate may be wary of going to the bathroom; this remedy is most appropriate for individuals who tend to dislike cold temperatures but prefer cold foods and drinks
- Bryonia -- for constipation with large, hard, dry stools; food feels like a lump in the individual's stomach and he or she may suffer from headaches with pain in both temples that may worsen with motion; this remedy is most appropriate for individuals who tend to be disagreeable, prefer cool rooms with open air, and whose thirst is quenched with cold drinks
- Lycopodium -- for small, hard stools with flatulence and bloating following a meal; this remedy is appropriate for individuals, particularly children, who fear being alone and have worsened symptoms in the late afternoon and early evening

#### Acupuncture

The studies investigating acupuncture treatment for constipation have been small and have produced both positive and negative results, meaning that sometimes the research suggests that acupuncture is helpful and sometimes it seems to be neutral – no benefit beyond conventional treatment but no harm either. In the case of gastrointestinal conditions like constipation, a qi deficiency is usually detected in the colon and lung meridians.

#### Chiropractic

Although no well-designed trials have evaluated chiropractic treatment for constipation, some chiropractors suggest that manipulation helps relieve constipation in certain individuals.

## Massage and Physical Therapy

Therapeutic massage can help reduce stress and help relieve constipation related to nervous tension and the resultant intestinal spasm.

### Other Considerations Pregnancy

Constipation is common in pregnancy and is usually relieved by changing your diet and drinking more water. DO NOT take herbs that are stimulating to the digestive tract since they can induce contractions and not use any laxative herbs during pregnancy.

#### **Prognosis and Complications**

The passage of large, wide stools may tear the mucosal membrane of the anus, especially in children. This can cause bleeding and the possibility of an anal fissure.

## 39. Chron's disease; Inflammatory Bowel Disease, Crohn's (CD)

Crohn's disease (CD) is a chronic condition characterized by patchy areas of inflammation and ulcers (open sores) along the innermost layer of the digestive tract. Such lesions can develop anywhere from the mouth to anus, but the majority of cases involve the small intestine or the first part of the large intestine. Between these patches of inflammation and ulceration there remain stretches of normal, healthy tissue. CD is closely related to a similar condition known as ulcerative colitis (UC). Both CD and UC are considered inflammatory bowel diseases (IBD). CD affects between 2 and 7 out of

100,000 people and researchers believe that these numbers are growing. CD develops mostly between the ages of 15 and 40, although children and older adults may also develop the condition. People of Jewish heritage are up to six times more likely to develop CD than are people in the general population. Although medication and strict diets can reduce the inflammation of CD, most people with the condition will require surgery to remove part of the digestive tract at some point in their lives. Unfortunately, however, surgery does not completely cure or eradicate the disease.

## Signs and Symptoms

The most common signs and symptoms of CD are diarrhea and abdominal pain. The symptoms can range from mild to severe.

- Diarrhea (with or without blood)
- Abdominal pain and bloating
- Fatigue
- Poor appetite
- Weight loss
- Fever
- Nausea and vomiting
- Floating stools (which is caused by poor digestion of fat)

#### Causes

There are many theories regarding the specific cause of CD, although none have been proven. It is most likely that a variety of factors work together to bring about the disease. These factors range from genetics, faulty immune system reactions, environmental influences, cigarette smoking, and perhaps diet. Some people are genetically at risk for CD, and an infection or other toxin may cause an abnormal immune reaction, which then causes CD.

#### Risk Factors

- Jewish heritage (three to six times more likely than the general population)
- European (particularly Scandinavian) ancestry
- · Family history of IBD
- Cigarette smoking
- Living in an industrialized country (particularly an urban area)
- Diet high in sugar and hydrogenated fat and low in fruit and vegetables

## Diagnosis

A healthcare practitioner will perform a thorough physical exam as well as a series of tests to diagnose CD. Blood tests may reveal anemia and a high white blood cell count. Stool samples may indicate whether there is bleeding or infection in the colon or rectum. The following procedures may be used to diagnose CD. They are also helpful in distinguishing between ulcerative colitis, CD, and other inflammatory conditions.

Endoscopic techniques
 (sigmoidoscopy and
 colonoscopy)—procedures in which
 an endoscope (a long, flexible,
 lighted tube connected to a
 computer and television monitor) is

inserted into the anus to investigate the lining of the colon and rectum. sigmoidoscopy is used examine the rectum and the left colon and can be conducted without sedation. A colonoscopy can reveal inflammation. bleeding. ulcers along the entire colon wall but this procedure usually requires sedation. Tissue samples (biopsies) may be taken from the colon wall for examination under a microscope in order to make a definitive diagnosis of CD.

- Barium X-ray—a patient swallows barium, which passes into the small intestine and shows up on an x-ray image. This image may reveal inflammation, ulcers, and other abnormalities in the intestinal wall.
- CT scans—this imaging technique is useful in diagnosing inflammatory bowel diseases such as CD and ulcerative colititis

#### **Preventive Care**

Although there is no known way to prevent CD, the number of relapses can be reduced the right combination with of drug treatment, lifestyle changes, and nutrition. Studies show that a weekly injection of the drug methotrexate may help prevent recurrences. Exercise can help prevent the stress and depression that often accompany CD, and quitting smoking can reduce recurrences in those who use tobacco. Fish oil (which contains omega-3 fatty acids) and a bland diet also show promise as means of preventing relapse.

#### **Treatment Approach**

The primary goal in treating CD is to control inflammation and replenish lost nutrients. The choice of treatment for CD depends on the severity of the disease. For example, people with mild to moderate CD are usually treated with medications that reduce swelling and suppress the immune response. More severe cases of CD may require surgery. In addition to medications, many people with inflammatory bowel diseases such as CD commonly turn to complementary and alternative remedies. A lifestyle changes; dietary adjustments (such as including a rich variety of fruits and vegetables and maintaining low levels of fat and sugar), specific herbs and supplements

(such as turmeric) may be useful additions to drug treatment. Mind/body techniques (such as hypnosis and meditation) can help reduce stress associated with the disease.

## Lifestyle Stress

At least one study has shown that IBD often begins within 1 year of a very stressful life event, such as the death of a family member. In addition, people with CD report that stress worsens their symptoms. Moreover, the anxiety associated with all of the potential consequences can also be very stressful. Therefore, relaxation techniques, such as yoga, tai chi, and meditation are worth considering, particularly when used in addition to other forms of treatment.

#### Exercise

Exercise may also be helpful for those with CD. For example, one small study suggests exercise increases the sense of satisfaction, decreases worrying, enhances energy, and lessens feelings of hopelessness in those with CD. Although exercise is generally considered safe for people with CD, those with the condition must take certain precautions when exercising and should talk to their healthcare practitioners before starting an exercise program. It is especially important for people with CD to drink one to two glasses of water before exercising and one glass of water every twenty minutes while exercising to prevent dehydration. Exercise should be avoided during symptom flare-ups or if the individual has a fever. Extreme fluctuations in body temperature during exercise should also be avoided.

#### **Smoking**

Cigarette smoking is a risk factor for CD and studies have shown that it may worsen symptoms of the disease. Quitting smoking reduces the rate of symptom recurrence.

#### Medications

Medications do not cure CD but they can significantly reduce symptoms of the condition. The following medications are commonly used to treat CD:

 Sulfasalazine—reduces inflammation during acute flareups; usually taken with folic acid; side effects include abdominal discomfort, nausea, and lowered sperm count

- Mesalamine—reduces inflammation during acute flare-ups and helps prevent recurrences
- Olsalazine and bulsalazide reduces inflammation during acute flare-ups and helps prevent recurrences; has fewer side effects than sulfasalazine
- Corticosteroids (such budesonide. prednisone. and prednisolone)—reduce inflammation by decreasing the production of prostaglandins (substances in the body that contribute to the development of and inflammation); corticosteroids are not effective for preventing recurrences; side effects (particularly over time) include acne, and an increased risk of infection, osteoporosis, high blood pressure, excessive hair growth, diabetes, and disorders of the eye including glaucoma and cataracts
- Medications that suppress (such immune system azathioprine, 6-mercaptopurine, cyclosporine, and methotrexate)medications decrease these inflammation by suppressing the immune response; used when other therapies fail to improve symptoms or in combination with steroids to reduce the dose of the steroid medication
- Antibiotics (such as ciprofloxacin and metrondidazole)—may be prescribed for individuals who undergo surgical resection or have an excess accumulation of pus and bacterial overgrowth; side effects include nausea and anorexia
- Antidiarrheal medications (such as loperamide, diphenoxylate, for individuals psyllium)—used with mild to moderate diarrhea. Medications used to treat diarrhea must be used only under medical extreme with and supervision caution; they can slow down the of movements normal gastrointestinal tract and, in severe cases, may cause a complication known as toxic megacolon.

e Biological therapy—treatments designed to alter the immune response. This form of therapy often involves the use of agents called biological response modifiers (such as infliximab) and is used only in severe cases when other medications have failed to improve symptoms. Risks include development of infections such as tuberculosis.

## Surgery and Other Procedures

Although surgical procedures will not cure CD, three out of four people with CD must eventually have resections. Surgery may be required because of rupture of the colon; persistent fistulas and abscesses; and other problems caused by the disease. In some cases less invasive techniques may be used. For example, laproscopic procedures, in which the intestines are viewed and worked on through a small incision, allow for partial resection without extended hospital stays. Fibrous strictures may be treated by a procedure called stricturoplasty, in which a "balloon" is inserted in the intestine and expanded.

## Hyperbaric Oxygen Therapy (HBOT)

Several studies have suggested that HBOT may be a useful additional treatment for some people with CD. HBOT is a technique in which a person is given 100% oxygen at greater than normal pressure. The increased pressure raises the amount of oxygen being delivered to tissues, and this enhances the body's wound-healing abilities. This enhanced ability is particularly useful for people with CD in difficult-to-treat areas such as the anal region.

## **Nutrition and Dietary Supplements**

People with CD are often malnourished and studies indicate that as many as 70% to 80% of individuals with this condition experience significant weight loss. This may occur because gastrointestinal discomfort, pain, and nausea make it difficult to eat or because a badly damaged or surgically shortened bowel prevents adequate nutrient absorption and digestion. Some medications are also thought to reduce stores of certain nutrients and vitamins in the body. For example, sulfasalazine lowers absorption of folate and corticosteroids can reduce levels of calcium. Ensuring adequate nutrition is therefore a crucial part of CD treatment. In

most cases, dietary modification and supplements provide sufficient nutrition. People with significant malnourishment, severe symptoms, or those awaiting surgery may require total parenteral nutrition (nutrition maintained entirely by intravenous injection).

#### Diet

Low fruit and vegetable consumption and high fat and sugar consumption may increase an individual's risk for developing CD. Certain foods may also reduce symptoms and decrease the likelihood of recurrences. Studies suggest the following:

- Regular intake of fruits and vegetables, and lowered fat and sugar consumption may reduce the risk of developing CD.
- Certain foods may aggravate symptoms of CD (for example, dairy products, fats, spicy foods, and artificial sweeteners) and should be avoided by people with the condition.
- After surgery, people with CD should avoid foods high in organic acids known as oxalates (for example, spinach, rhubarb, black and blueberries, red currants, beets, celery, cucumbers, potatoes, coffee, tea, diet sodas, tofu, and chocolate) because oxalates can increase the risk of kidney stones.
- . Elemental diets help prevent symptom recurrence and may be as effective as certain medications in treating CD. Elemental formulas are "predigested," meaning that they contain only the basic building blocks of food and need not be broken down into smaller substances along the digestive tract. An elemental diet because it carries certain food restrictions that may make it less appetizing. Adding omega-3 fatty acids to an elemental diet may boost its nutritional content and thereby improve the likelihood that CD patients will adhere to it.

#### Vitamins and Minerals

Because many people with CD have vitamin and mineral deficiencies (due to decreased nutritional intake and absorption by the colon, excessive diarrhea, and surgical resection of parts of the digestive tract), a multivitamin is often recommended by healthcare professionals. People with CD have significantly lower levels of selenium, vitamins A, E, and various B vitamins.

#### Vitamin B9 (Folate)

People with CD often have low levels of folate in their blood cells and some experts suggest that this may be due, at least in part, to sulfasalazine and/or methotrexate use. CD patients may be due to decreased intake of folate in the diet and poor absorption of this nutrient. Folate deficiency may contribute to high levels of homocysteine, an amino acid that is thought to have a role in the development of certain chronic diseases.

#### Vitamin D

People with CD often have low levels of vitamin D, which is needed to maintain healthy bones. In fact, bone loss in not an uncommon complication among people with CD. In one study, supplementation with vitamin D prevented bone loss in patients with CD, particularly in those whose vitamin D levels returned to normal.

#### **Omega-3 Fatty Acids**

Although studies overall have conflicting results, at least one study has found that, compared to placebo, fish oil supplements containing omega-3 fatty acids (namely EPA and DHA) may reduce symptoms of CD and prevent recurrence of the condition. Some experts suggest that measuring the blood levels of different types of fatty acids in people with CD may be necessary in order to determine if supplementation may be useful. Several studies also suggest that time release preparations may reduce the side effects commonly associated with this substance (such as flatulence and diarrhea).

## N-acetyl glucosamine

Preliminary evidence suggests that N-acetyl glucosamine supplements or enemas may improve symptoms of CD in children with IBD who did not improve after using other treatments, but further research is needed to determine whether the substance is safe and effective for the treatment of CD.

#### **Probiotics**

Animal studies and preliminary human studies have found that probiotics, or "good" bacteria such as *lactobacillus*, may improve symptoms of CD and help prevent flare-ups. Further research is warranted.

#### Zinc

There may be a role for zinc in changing the immune response of people with inflammatory bowel diseases.

#### Herbs

A professional herbalist may recommend one or more of the following herbs based on their chemical makeup and how they have been used in traditional medicine (particularly Ayurvedic and Traditional Chinese disciplines):

- Cat's claw (Uncaria tomentosa)—
   used by indigenous people in the
   Amazon as well as other regions of
   South America to treat intestinal
   disorders such as diarrhea, ulcers,
   and inflammatory bowel diseases
- Ginkgo (Ginkgo biloba)—contains substances that act as antioxidants and therefore, may protect the gastrointestinal tract from the damaging effects of CD
- Goldenseal (Hydrastis canadensis)—reduces the ability of bacteria to stick to the intestinal wall thereby protecting against CD; also has anti-inflammatory properties
- Green tea (Camellia sinensis)—has anti-inflammatory properties and may also reduce risk of cancer (a potential complication of CD)
- Salai guggal (Boswellia serrata)—
  this Ayurvedic herbal remedy has been compared to sulfazalazine for the treatment of ulcerative colitis; the medicine and the herb were considered equally effective but further studies for CD, specifically, are warranted
- Slippery elm (Ulmus fulva)—
  relieves gastrointestinal irritation
- Turmeric (Curcuma longa)-has anti-inflammatory and antioxidant reduces and properties, possibility of cancerous changes in digestive treat cells; used to Ayurvedic in disorders Medicine Chinese Traditional traditions
- Wild indigo (Baptisia tinctoria)
  contains substances that act as
  antioxidants; also has properties that

protect against infection and reduce inflammation

#### Homeopathy

- Mercurius-for foul-smelling diarrhea that may have streaks of blood accompanied by a sensation of incomplete emptying; remedy is most appropriate for individuals who tend feel exhausted following bowel movements, experience fluctuations body temperature, perspire frequently, and have a thirst for cold fluids
- Podophyllum—for explosive, gushing, painless diarrhea that worsens after eating or drinking; exhaustion often follows bowel movements and the individuals for whom this remedy is appropriate may experience painful cramps in the lower legs and feet
- Veratrum album—for profuse, watery diarrhea accompanied by stomach cramps, bloated abdomen, vomiting, exhaustion, and chills; the diarrhea tends to worsen as a result of eating fruit; the individual for whom this therapy is appropriate tends to crave cold liquids

## Mind/Body Medicine

## Hypnosis and Other Relaxation Techniques

Studies suggest that hypnosis may improve immune function, increase relaxation, decrease stress, and ease feelings of anxiety. Many healthcare practitioners and people with CD have reported that symptoms of the disease improve with relaxation methods such as hypnosis, meditation, and biofeedback. Some people with CD suffer from depression and anxiety and may be referred to a psychiatrist or psychologist for appropriate care.

Other Considerations Pregnancy

Women who are in remission at the time of conception generally have normal pregnancies and healthy babies. However, women with active disease are more prone to miscarriages, spontaneous abortions, and stillbirths. The disease often worsens during pregnancy. For this reason, women with active CD who are or wish to become pregnant should continue maintenance therapy under the guidance of their

healthcare practitioner. Corticosteroids or sulfasalazine are considered relatively safe during this time. Pregnant women should high doses of vitamins. obstetrician can provide instructions regarding appropriate multivitamin use during pregnancy. The herbs cat's claw (Uncaria tomentosa), goldenseal (Hydrastis canadensis), and turmeric (Curcuma longa) are not recommended during pregnancy. Women who are breastfeeding should also avoid cat's claw and goldenseal.

## Warnings and Precautions

People with CD should avoid herbs that loosen the bowels. These include:

- Buckthorn bark (Rhamnus frangula)
- Cascara sagrada bark (Rhamnus purshiana)
- Senna leaf and senna pod (Senna alexandrina)

People with CD should also avoid the following foods because they tend to worsen symptoms:

- Milk (and milk products)
- Spicy foods
- Fats
- Sugars and artificial sweeteners

Following surgery, people with CD should avoid the following foods, as they may increase the risk for kidney stones:

- Spinach, kale, greens (collards, dandelion, mustard)
- Rhubarb, blackberries, blueberries, and red currants
- Green beans, beets, celery, cucumbers, eggplant, okra, green peppers, sweet potatoes, rutabagas, summer squash
- Coffee
- Tea
- · Diet sodas
- Chocolate and cocoa, chocolate milk
- Tofu

#### **Prognosis and Complications**

A wide range of complications can develop from CD, some of which are listed below.

- Narrowing of the colon, which may cause obstruction
- Perforation of the colon
- Abscesses (pus-filled pockets of infection) in the colon
- Toxic megacolon (grossly swollen colon that may rupture)

- Fistulas (an abnormal passageway such as an opening near the anus)
- Infection of the blood (called sepsis)
- Colon cancer
- Nutritional problems (including weight loss and reduced muscle mass)
- Joint pain and arthritis (such as ankylosing spondylitis)
- Bone loss which can result in osteoporosis
- Gallstones and other damage to the biliary system
- Skin rashes
- Eye infections/inflammation
- Mouth ulcers, gum inflammation, and dental cavities

- Liver damage
- Blood clots
- Depression and anxiety
- Anemia
- Menstrual irregularities
- Sexual dysfunction including pain with intercourse and diminished sexual desire

The area of complementary and alternative medicine for CD, preliminary studies indicate that lifestyle changes, including stress reduction, dietary adjustments, and mind/body techniques can work well in conjunction with conventional therapies to help prevent and/or treat the disease.

## 40. Cutaneous Drug Reactions; Skin Disorders

reactions Cutaneous drug adverse responses to drugs that appear on the skin. A red, itchy rash and hives are the most common reactions; however, there are many different types, and some are lifethreatening. Drugs that most frequently include sulfa drugs, problems cause penicillins and antibiotics such as tetracyclines, and phenytoin.

## Signs and Symptoms

- · Red, itchy rash or blotches
- Hives
- · Acne-like eruptions
- Pigmentation changes (may appear as brown or gray blotches)
- · Dry, cracked skin, as in eczema
- · Peeling skin
- Tissue death (necrosis)

#### What Causes It?

Some drugs that might cause cutaneous reactions include the following.

- Allopurinol (gout medication)
- Antibiotics (penicillins, tetracyclines)
- Aspirin
- Barbiturates
- Chemotherapeutic agents (cancer treatments)
- Cortisones and other steroids
- Diuretics (water pills)
- Heavy metals (gold, copper)

- Nonsteroidal anti-inflammatory drugs (NSAIDs)
- Phenothiazines (sedatives)

#### What to be done

Examine skin, mouth, and throat. Make a list of all the drugs (prescription, nonprescription, and illegal) and herbal and vitamin supplements you've taken over the last four weeks. Stop taking the suspected drug and prescribe something else.

**Treatment Options** 

Choice of treatment depends on the type of reaction you are having and how serious it is. Symptoms will often disappear once you stop taking the suspected drug; however, you may need treatment to recover. Physician may prescribe drugs to help stop the reaction, such as epinephrines, corticosteroids, antihistamines, or topical ointments.

#### **Drug Therapies**

- Corticosteroids for (systemic/intravenous): anaphylaxis, severe hives, and other allergic skin reactions—prednisone 40 to 60 mg/day, 5 to 10 days
- Corticosteroids (topical): for limited eczema and inflammatory skin lesions
  - Antihistamines: for itching diphenhydramine 25 to 50 mg every six hours; hydroxyzine 10 to 25 mg every six to eight hours; for

anaphylaxis/widespread hives—epinephrine (0.01 ml/kg to 0.3 ml max.)

- Epinephrine: for severe respiratory/cardiovascular implications
- Topical lotions or ointments: for itching, lesions, and other inflammatory skin reactions
- Baths (with or without additives)
- Special treatments: for severe reactions (depending upon severity)
- Antacids in some cases

#### Surgical Procedures

Surgical removal of dead tissue in severe reactions

## Complementary and Alternative Therapies Nutrition

- Vitamin C (250 to 500 mg two times per day) stabilizes certain types of skin cells and stops reactions.
- B-complex with extra B12 (1,000 mcg per day) aids in skin health.
- Vitamin E (400 to 800 IU per day) improves circulation to your skin.
- Zinc (30 to 50 mg per day) supports the immune system.
- Bromelain (125 to 250 mg two to three times per day) reduces inflammation.
- Magnesium (400 to 800 mg per day) may help prevent spasms in the bronchial passages.

#### Herbs

Tinctures may be used singly or in combination as noted.

- Turmeric (Curcuma longa, 100 mg two to three times per day)
- Quercetin (up to 1,000 mg three times per day)
- Hesperidin (200 mg three to four times per day)

An infusion of equal parts of coneflower (Echinacea augustifolia), yarrow (Achillea millefolium), chamomile (Matricaria recutita), peppermint (Mentha piperita), and red clover (Trifolium pratense) will strengthen your immune system, reduce swelling, and help with lymph drainage (fluid that is part of immune system).

To relieve itching, use one or more of the following herbs brewed as a tea to make a

skin wash (1 tsp. of herb per cup of water): peppermint, chickweed (Stellaria media), or chamomile (Matricaria recutita). Be sure the tea is cool, and apply to the affected area as needed. To help your skin heal, add one more of the following: marigold (Calendula officinalis), comfrey (Symphytum officinale), coneflower or (Echinacea angustifolia). For open sores use powdered slippery elm (Ulmus fulva), goldenseal (Hydrastis canadensis), marshmallow root (Althaea officinalis). Add enough skin wash to make a paste. Apply to affected area as needed. Aloe vera gel applied to your skin can soothe burning and reduce swelling. For further skin relief, add powdered oatmeal (or 1 cup of oatmeal in a sock) to a lukewarm bath. Or, make a skin balm from flaxseed oil (2 tbsp.) plain or with 5 drops of oil of chamomile or marigold.

#### Homeopathy

- Apis mellifica for red rashes accompanied by hives, swelling, itching, and stinging sensations; symptoms are relieved by cold applications; this remedy is most appropriate for individuals who tend to be very tired
- Bryonia for fine, dry bumps concentrated on the face; symptoms worsen with movement; this remedy is most appropriate for individuals who are irritable
- Croton tiglium for inflamed, itchy skin that is tender to touch; rash is often concentrated around the scalp, eyes, and/or genitals
- Graphites for rashes that may be cracking and even oozing liquid; rashes that improve with graphites are often accompanied by chills and a burning sensation; symptoms worsen with both warmth and cold, damp weather
- Ledum for severely inflamed rashes that worsen at night and improve with cool compresses
- Rhus toxicodendron for burning and itching that are relieved by hot applications; this remedy is most appropriate for individuals who are generally restless and irritable

- Sepia for a dry, brownish-red rash with tiny raised lesions
  - Sulphur for red, itchy rashes that are worsened at night or by warmth; this remedy is most appropriate for individuals who crave cold drinks and may be lazy and irritable
  - *Urtica urens* for itchy, burning rashes that worsen with cold air

#### Follow up

It is important to stay in touch with your physician until the reaction is completely cleared up. If you have severe reactions, wear medical-alert jewelry stating what drugs you are allergic to.

## 41. Cystic Fibrosis (CS)

Cystic fibrosis (CF) is a chronic, progressive, and frequently fatal genetic disease of the glands that produce or secrete sweat and mucus. CF primarily affects the respiratory, digestive, and reproductive tracts in children and young adults. On average, individuals with CF have a lifespan of around 30 years.

## Signs and Symptoms

- Thick, viscous mucus secretions in the lungs
- Changes in color and amount of sputum (material coughed up from the lungs)
- Chronic cough, possibly with blood streaking
- Wheezing
- Bronchitis
  - Chronic sinusitis
- Asthma
- Nasal polyps (fleshy growths inside the nose)
- Weight loss, failure to thrive in infants, abdominal swelling
  - Excessive salt in sweat, dehydration
- Failure of newborn to pass stool
- Abdominal pain, flatulence
- Fatigue

#### What Causes It?

CF is caused by a mutation in the gene that produces the protein that moves chloride ions (sodium chloride, or table salt) through cell membranes. This protein is present in cells lining the passageways of the lungs, pancreas, colon, and genitourinary tract. When this protein is abnormal, the movement of chloride ions and water in the lung and other cells becomes blocked, and there is secretion of abnormal mucus.

## Who's Most At Risk?

Inherited genes cause CF. To have CF; a child must inherit two abnormal genes—one from each parent.

#### What to be done

A baby born with the CF gene usually has symptoms during its first year, although signs of the disease may not appear until adolescence or even later. Make a diagnosis and guide in determining which treatment or combination of therapies will best alleviate symptoms of the disease. Perform a physical exam and run laboratory tests, including a sweat test, which checks for higher-thannormal amounts of sodium and chloride in the sweat. Other tests include a sputum test, genetic screening, and a stool analysis. Imaging techniques may be used to reveal lung conditions and abdominal obstruction.

## **Treatment Options Treatment Plan**

The hope for the future is that gene therapy could repair or replace the defective CF gene. Or, a person with CF might be given the active form of the protein product that is scarce or missing. CF patients suffer from frequent lung infections caused by obstructed breathing. So, the mainstays of a treatment plan are physical therapy, exercise, and medications for reducing the mucus blocking the lung's airways.

#### **Drug Therapies**

Medications are often aerosolized and can be inhaled. These include the following.

- Bronchodilators (which widen the breathing tubes)
- Mucolytics (which thin the mucus)
- Decongestants (which reduce swelling of the membranes of the breathing tubes)
- An enzyme that thins the mucus by digesting the cellular material trapped in it

 Antibiotics to fight lung infections also are used

The digestive problems caused by CF are managed with these medications.

- Pancreatic enzymes which help digestion
- Enemas and mucolytic agents to treat intestinal obstructions

## Surgical and Other Procedures

CF patients with respiratory failure may need a heart-lung transplant. Those patients experiencing gastrointestinal obstruction may also require surgery.

## Complementary and Alternative Therapies

#### Nutrition

CF patients should not eat large quantities of the following foods, which increase mucus production or cause allergies: dairy (especially milk, cheese, and ice cream), eggs, peanuts, oranges, bananas, sugar, saturated fats, wheat, barley, oats, rye, excessive meat, and salt. CF patients should eat large quantities of foods that reduce mucus or inflammation, including: garlic, onions, watercress, horseradish, mustard, umeboshi plums, parsley, celery, rose pits tea, pickles, lemon, anti-inflammatory oils (nuts, seeds, cold-water fish). Potentially beneficial nutrient supplements include the following.

- Pancreatic enzymes with meals (1,000 lipase units per kg for patients under 4 years, 500 units over 4 years)
- Antioxidants: selenium 200 mcg a day, vitamin E 400 IU a day, betacarotene 25,000 IU a day, and vitamin C 250 to 500 mg two times daily, all of which help protect lungs
- N-acetyl cysteine 200 mg three times a day to help thin mucus
- Zinc 10 to 30 mg a day to support immunity
- Quercetin (250 mg to 500 mg before meals) to reduce inflammation

#### Herbs

 To liquefy mucus: mix equal parts of four to six of the following herbs: thyme (*Thymus vulgaris*), Indian tobacco (*Lobelia inflata*), anise (*Pimpinella anisum*), hyssop (*Hyssopus officinalis*), licorice root (*Glycyrrhiza glabra*), and rosemary (*Rosemarinus officinalis*); 20 to 60 drops two to four times daily.

- To stimulate the pancreas: mix equal parts of blue flag (*Iris versicolor*), dandelion (*Taraxacum officinalis*), and fringe tree (*Chionanthus virginicus*); 10 to 15 drops in warm water before meals
- For acute infection: combine equal parts of coneflower (Echinacea purpurea), goldenseal (Hydrastis canadensis), thyme (Thymus vulgaris), wild indigo (Baptisia tinctoria), and elecampane (Inula helenium) with 15 drops of cayenne (Capsicum annuum); 20 to 30 drops every three to four hours

#### Homeopathy

- Antimonium tartaricum -- for wet, rattling cough (although the cough is usually too weak to bring up mucus material from the lungs) that is accompanied by extreme fatigue and difficulty breathing; symptoms usually worsen when the person is lying down
- Carbo vegetabilis -- for shortness of breath with anxiety, chills, and bluish skin discoloration

## Acupuncture

Acupuncture may help stimulate respiratory function and enhance immunity.

#### Massage

Therapeutic massage can help drain mucus from the lungs.

#### **Prognosis/Possible Complications**

Respiratory problems are the most common complication from CF.

#### Follow up

CF patients receive pulmonary function tests every three to six months. They also receive chest X rays every two to four years, or more often if needed.

## 42. Dementia; Senile Dementia

Dementia is a mental disorder that includes memory impairment and at least one of the following: difficulty speaking, impaired movement, and inability to plan and initiate appropriate behaviors socially or at work. Dementia usually occurs in elderly people. Approximately 2 to 4 percent of the population over age 65 has dementia caused by Alzheimer's disease.

## Signs and Symptoms

- Memory impairment
- Language problems
- Motor skills impairment (such as balance and walking)
- Impaired ability to recognize objects
- Inability to think abstractly
- Spatial disorientation (e.g., judging distances)
- Depression and suicidal behavior
- Uninhibited behavior
- Anxiety, mood, and sleep problems
- Hallucinations

#### What Causes It?

- Vascular disease
- General medical conditions, like traumatic brain injury
- Parkinson's, Huntington's, Creutzfeldt-Jakob, and other diseases
- Brain tumor
- Vitamin B deficiencies
- Drug or alcohol abuse, medications, or exposure to toxic substances

#### What to be done

However, since there is no definitive test for dementia, your provider will rely greatly on interviews with you and your family, especially to discover noticeable declines in mental and physical abilities.

#### **Treatment Options**

Treatments are aimed at reversing or lessening the symptoms. A combination of drug and psychiatric or behavioral therapies will be used. Physician may also closely evaluate current medications if you are elderly and have dementia, since older people are extremely sensitive to drugs. Exercise, both physical and mental, can slow the progress of dementia.

## Complementary and Alternative Therapies Nutrition

- Antioxidants are key—vitamin E (400 to 800 IU per day), vitamin C (1,000 mg three times per day), and coenzyme Q10 (10 to 50 mg three times per day)
- Vitamins: biotin (300 mcg); B1 (50 to 100 mg), B2 (50 mg), B6 (50 to 100 mg), B12 (100 to 1,000 mcg). B12 may need to be administered through injection for best results.
- Minerals: calcium and magnesium (1,000 and 500 mg per day, respectively), zinc (30 to 50 mg per day); excess of manganese and copper can increase the risk for dementia
- Intravenous chelating agents such as ethylenediaminetetraacetic acid (EDTA) may help restore normal circulation in the brain.
- Essential fatty acids, such as those found in alpha linolenic acid (ALA) and evening primrose oil, help regulate certain types of blood cells, stabilize arterial walls and have anti-inflammatory properties. Dietary changes include reducing intake of animal fats and increasing that of fish.

#### Herbs

- Ginkgo (Ginkgo biloba) is specific for preventing and treating Alzheimer's and senile dementia. May be taken in a standardized extract of 40 to 50 mg three times per day. If you are taking an anticoagulant drug, use ginkgo only under the supervision of your provider.
- Hawthorn (Crataegus monogyna) is a circulatory stimulant.
- Rosemary (Rosmarinus officinalis) stimulates circulation, improves digestion, and relieves depression.
- Siberian ginseng (Eleutherococcus senticosus) or American Ginseng (Panax quinquefolium) increase endurance and improve cerebral circulation. Use these herbs with

- caution if you have high blood pressure.
- Lemon balm (Melissa officinalis) reduces spasms and anxiety.
- Ginger (Zingiber officinale) helps with general weakness.
- St. John's wort (Hypericum perforatum) helps relieve depression and anxiety.

#### Homeopathy

- Alumina for dullness of mind, vagueness, slow answers to questions
- Argentum nitricum for dementia with irritability, especially with lack of control over impulses

- Cicuta for dementia after head injuries, especially with convulsions
- Helleborus for stupefaction, when a person answers questions slowly and stares vacantly
- Silica for mental deterioration with anxiety over small details

#### Follow up

Someone with dementia probably will require continuous care and monitoring by both your physician and family members.

#### **Special Considerations**

Caregiver and patient education focusing on knowledge of the disease, health, and the patient's well-being results in better patient care.

## 43.Depression

Depression is a mood disorder in which feelings of loss, anger, sadness, or frustration interfere with everyday life. Depression affects approximately 17 million people each year. It can be mild, moderate, or severe and occur as a single episode, as recurring episodes, or as chronic depression.

## The primary types of depression include:

- Major depression—five or more symptoms must be present; an episode must last at least 2 weeks, but tends to continue for 20 weeks.
- Dysthymia—a chronic, generally milder form of depression; symptoms are similar to major depression but more mild in degree
- Atypical depression—depression accompanied by unusual symptoms, such as hallucinations, delusions, and physical rigidity

## Other common forms of depression include:

- Postpartum depression experienced by 8% to 20% of women following delivery
- Premenstrual dysphoric disorder (PDD)—experienced by 3% to 8% of women; depressive symptoms occur 1 week prior to menstruation and disappear following menstruation
- Seasonal affective disorder (SAD)—experienced by 5% of adults, the majority of whom are women; occurs during the fall-

winter season and disappears during the spring-summer season

Depression may also occur with mania (known as manic-depression or bipolar disorder). In this condition, moods cycle between mania and depression.

#### Signs and Symptoms

While it is normal for most people to feel "down in the dumps" on occasion, a person with major depression feels significantly depressed for a prolonged period of time, has difficulty enjoying acts that were once pleasurable, and experiences at least five of the following symptoms for 2 weeks or more:

- Sleep disturbances—at least 90% of people with depression have either insomnia or hypersomnia
- Significant change in appetite (either weight loss or weight gain)
- Fatigue and loss of energy
- Feelings of worthlessness, self-hate, and inappropriate guilt
- Extreme difficulty concentrating
- Either agitation, restlessness, and irritability or inactivity and withdrawal
- Recurring thoughts of death or suicide
- Feelings of hopelessness

Although not generally considered to be defining characteristics of depression, many people with the condition report a lack of sex drive and sudden bursts of anger.

#### Causes

The causes of depression are complex and involve a combination of biologic, genetic, and environmental factors. People with depression may have abnormal levels of certain brain chemicals, including serotonin, acetylcholine, and catecholamines (such as dopamine). The following may alter the levels of these brain chemicals and contribute to development of depression:

- Heredity—a recently identified gene called SERT that regulates the brain chemical serotonin, has been linked to depression
- Chronic stress (such as from loss, abuse, or deprivation in early childhood)
- · Amount of exposure to light
- Sleep disturbances
- Social isolation
- Nutritional deficiencies (especially folate and omega-3 fatty acids)
- Serious medical conditions, such as heart attack or cancer
- Certain medications, including those for high blood pressure, high cholesterol, or irregular heartbeat

#### **Risk Factors**

Although depression is a condition that can affect anyone, regardless of age, race, or gender, the following factors may increase an individual's risk for an initial or recurrent episode of depression:

- Prior episodes of depression
- · Family history of depression
- Suicide attempt—a former attempt of suicide during a major depressive episode increases the likelihood of another episode of depression
- Female gender—the incidence of depression appears to be greater in women than in men, however, some researchers speculate that women may simply report their symptoms more frequently than men and that men may be more apt to mask their depressive symptoms with alcohol.
- Young adulthood or middle age—
  the highest occurrence of depression
  is between the ages of 25 and 44;
  the elderly are also at particular risk
  due to death of loved ones, physical
  illness, and loss of independence

- Stressful life events (such as the death of a loved one), particularly if the event occurs at a young age
- Postpartum period
- Chronic medical or psychological conditions including autoimmune diseases (such as lupus), cancer, heart disease, chronic headaches, chronic pain, anxiety, obsessivecompulsive disorder, and borderline personality disorder; medical conditions that cause shifts in hormones, such as thyroid disorders or menopause, may also contribute to depression.
- History of abuse (such as mental, physical, or sexual)
- Lack of social support system (such as a network of close friends or family)
- Current or past alcohol or drug abuse—25% of people with addictions have depression

#### Diagnosis

Unfortunately, many people with depression tend to refrain from disclosing any or all of their symptoms in this setting. Occasionally, even when the symptoms are discussed during an appointment, a physician may try to treat them individually, rather than picture recognizing the complete with a Working together depression. physician is extremely primary care important, however, because he or she is often the person who makes a referral to a psychiatrist who, in turn, makes a definite diagnosis of depression. Proper diagnosis of depression is the first step toward proper treatment. Only psychiatrists can prescribe medication, but psychologists and social workers, as well as psychiatrists, use psychotherapy as an important mode of treatment. These specialists will administer a screening test, such as the Beck Depression Inventory or the Hamilton Rating Scale, which consists of about 20 questions that assess an individual's risk for depression. Even before these psychological screening tests, however, several blood tests will be performed to determine whether nutrient deficiencies or underlying medical conditions (such as thyroid disorder) may be causing or contributing to depression.

## **Preventive Care**

The following steps can help prevent depression or decrease the chances of relapse:

- Adequate sleep, regular exercise, and a balanced, healthy diet may help prevent depression and diminish symptoms of this mood disorder.
- Using mind/body techniques, such as biofeedback, meditation, and tai chi, is effective ways to prevent or reduce symptoms associated with depression.
- Psychotherapy directed at coping skills generally helps prevent relapse.
- Family therapy may prevent children or teens of depressed parents from becoming depressed later in life.
- Compliance with the prescribed treatment regimen decreases the chance of relapse.

#### Treatment Approach

People with depression have a number of options for treatment, but a combination of psychotherapy and antidepressant medications is the regimen of choice, particularly for people with major depression. Cognitive-behavioral appears to be the most effective type of psychotherapy, particularly for adolescents and people with atypical or postpartum depression. As many as 90% of people with depression improve from a combination of psychotherapy and antidepressants; however, adverse side effects from certain medications make it difficult for many to their medications. complementary and alternative therapies may be helpful in reducing the side effects from such medications; complementary and alternative therapies may actually diminish the symptoms of depression.

## Lifestyle Exercise

Regular exercise (either aerobic or strength/flexibility training) significantly reduces depressive symptoms in people with mild to moderate depression and improves the mood of people with major depression.

#### Diet

People with depression who eat a healthy diet that includes fatty fish (such as salmon, mackerel, herring, and sardines) two to three times per week may significantly reduce their feelings of depression and anxiety. Fatty fish contain omega-3 polyunsaturated fatty acids (PUFAs), and many individuals with depression are deficient in substance. Some studies suggest that dietary supplementation with docosahexaenoic acid (DHA), one type of PUFA, may help prevent depression. Diets rich in fruits and vegetables, particularly leafy vegetables, are also recommended for people with depression. For those who have difficulty maintaining a balanced diet, supplementation with a multivitamin may also be recommended.

#### Medications

Antidepressant medications effective; reports indicate that they are 90% successful in treating depression. In general, medications are taken for at least 4 to 6 months to assure complete and effective treatment. However, antidepressants often cause adverse side effects, making it difficult for some people to comply with taking their medications. Medications must not be stopped without first discussing this change with physician. a Most antidepressants cause withdrawal symptoms if they are not discontinued slowly over

## Selective Serotonin Reuptake Inhibitors (SSRIs)

SSRIs increase the activity of a chemical in the brain called serotonin. Most healthcare practitioners will prescribe SSRIs before any other antidepressant medication for depression, in part because the side effects associated with SSRIs are generally fewer than for other classes of antidepressants. Typical side effects caused by SSRIs include stomach upset, weight gain or loss, drowsiness, sexual dysfunction (such as impotence, decreased libido, and diminished orgasm), headache, jaw grinding, and apathy. Very unusual side effects from this class of prescription drugs include extreme impulsivity, agitation, tremors. insomnia. People who discontinue taking SSRIs due to side effects usually attribute their discontent to sexual dysfunction. Drugs classified as SSRIs include:

- Fluoxetine
- Sertraline
- Paroxetine-most likely in class to cause sexual dysfunction
- Fluvoxamine
- Citalopram—least likely in class to cause sexual dysfunction

antidepressant group of Another fewer negative medications may cause sexual side effects. These include:

- Bupropion-should not be used if there is history of or risk for seizure
- Nefazodone-no sexual dysfunction reported; begins to work very quickly; may cause a decrease in blood pressure when going from lying or sitting to standing
- Venlafaxine-may impair sexual function; not recommended in the elderly; may improve quality of life more effectively than other antidepressants, but can cause irregular heart rhythm; withdrawal from the medication is difficult
- Mirtazapine-may be particularly effective if feelings of anxiety are also present; helps with insomnia but may cause drowsiness; other side effects are blurred vision, and gain, weight damage production of cells in the bone marrow (very rare)
- Maprotiline-may cause dry mouth, drowsiness, sensitivity to the sun, and seizures

#### **Tricyclic Antidepressants**

Tricyclics increase the activity of the brain chemicals serotonin and norepinephrine. They are as effective as SSRIs, but are usually prescribed only to those who do not respond well to SSRIs because side effects are quite common and are usually less tolerable. Dry mouth, blurred constipation, sexual dysfunction, dizziness, drowsiness, gain, urgency, drop in blood pressure when going from lying or sitting to standing (causes and lightheadedness), dizziness irregular heart rhythm are among the side effects of tricyclics. Tricyclic antidepressants include:

Amitriptyline

- Amoxapine—increases seizure in those who are prone to have a seizure
- Clomipramine—used for obsessive/compulsive disorder
- Desipramine
- Doxepin—may help with insomnia
- Imipramine—may cause a rare lung disorder called idiopathic pulmonary fibrosis
- Nortriptyline—less risk of irregular heart rhythm than others in this class
- Protriptyline—less drowsiness than others in this class and may even cause weight loss; may lead to sun sensitivity
- Trimipramine—high risk for irregular heart rhythm

Monoamine Oxidase Inhibitors (MAOIs) MAOIs boost the levels of norepinephrine, dopamine, and serotonin in the brain. MAOIs are generally prescribed only when have antidepressants effective, which may occur in people with atypical depression. People MAOIs may experience a sharp increase in blood pressure after consuming food or drink containing the amino acid tyramine. MAOIs also negatively interact with other ritalin including medications, pseudoephedrine, and should not be taken with other classes of antidepressants.

MAOIs include:

- Phenelzine—should with a history of seizures or bipolar disorder
- Isocarboxazid—side effects include dysfunction. drowsiness, sexual weakness, trembling, and blurred
- Tranylcypromine—should not be used if there is any history of kidney disease or bipolar disorder

Surgery and Other Procedures

Electroconvulsive Therapy for depression is usually reserved for cases in which therapies have been unsuccessful. In this procedure, a small electrical current induces a seizure lasting seconds. muscle relaxant and mild sedative prior administered

procedure. ECT is generally repeated every 2 to 5 days for a total of six treatments. It may cause temporary confusion, memory impairment, headache, muscle aches, irregular heart rhythm, or nausea.

Magnetic Resonance **Imaging** (MRI)-Guided Cingulotomy involves the application of an electrical current to a specific part of the brain; the MRI is used as a guide for an exact placement. Longimprovement term has reported using this technique in over 50% of people with depression who have not responded to other modes of therapy.

## **Nutrition and Dietary Supplements**

Certain nutrients and dietary supplements have been associated with depression, including:

#### Folate (Vitamin B9)

Between 15% and 38% of people with depression have low folate levels in their bodies and those with very low levels tend to be the most depressed. Having low levels of folate may also affect treatment; people with folate deficiencies tend to respond less effectively to the SSRI, fluoxetine, than those with normal amounts of folate. Therefore, folate supplementation (typically between 400 and 800 mg) may be useful in both treating depression and assuring the appropriate effects of some antidepressant medications. Elevated homocysteine levels indicate a deficiency of folate even if the levels of folate in the blood are normal. If the MVI alone is not enough to lower homocysteine and improve folate function, the provider may suggest additional folate along with vitamins B6 and B12.

## Omega-3 fatty acids

Essential fatty acids, such as omega-3 and omega-6 fatty acids play a crucial role in the function of brain chemicals, particularly serotonin and dopamine. Low levels of omega-3 fatty acids (found in cold-water fish such as tuna and salmon), or a high ratio of omega-6 fatty acids (found in certain vegetable oils, such as corn and soybean oils) to omega-3 fatty acids, may be associated with depression.

## S-Adenosinemethionine (SAMe)

The dietary supplement it may be just as effective as tricyclic antidepressants for treating depression, but with fewer side effects. It appears to boost serotonin levels in the brain, but further research investigating the mechanism of action, safety, and effectiveness

#### Tryptophan

Tryptophan is an amino acid involved in the production of serotonin. Studies suggest that tryptophan depletion can lead to diminish serotonin levels, and in some cases, may increase a person's susceptibility depression. Tryptophan supplementation alone may not be enough to reduce symptoms of depression. However, while research results are intriguing, tryptophan has been associated with development of serious conditions such as liver and brain toxicity, and with eosinophilic myalgia syndrome (EMS), a potentially fatal disorder that affects the skin, blood, muscles, and organs. In addition, given the possibility of adverse interactions, tryptophan should not be used in conjunction with MAOIs or SSRIs.

## 5-Hydroxytryptophan (5-HTP)

A by-product of tryptophan known as 5-HTP may be as effective as SSRIs and tricyclic antidepressants in treating depression, but with fewer side effects. As with tryptophan, EMS has been reported in 10 people taking 5-HTP. Further research is necessary to determine whether supplementation with 5-HTP is safe and effective for the treatment of depression.

#### Selenium

The mineral selenium, found in wheat germ, brewer's yeast, liver, fish, shellfish, garlic, sunflower seeds, Brazil nuts, and grains, significantly affects mood. People with low levels of selenium, those who consumed a diet high in selenium reported decreased feelings of depression after 5 weeks.

#### Inositol

Inositol is a naturally occurring substance involved in the production of certain brain chemicals. Levels of inositol were lower in the cerebrospinal fluid of depressed people compared to healthy people. Several human studies suggest that inositol may be of value in the treatment of depression, particularly

those who do not respond to for antidepressant medications.

#### **Tyrosine**

A number of studies conducted in the 1970s showed encouraging results regarding the use of tyrosine to ease symptoms of depression. In one study from 1990, however, tyrosine failed to demonstrate any anti-depressant activity.

#### Melatonin

In one study of only 10 people with seasonal affective disorder, those who received supplements had significant melatonin improvement in their symptoms compared to those who received placebo.

#### Vitamin C

Some healthcare professionals recommend vitamin C to reduce the symptom of dry mouth, a side effect experienced by many people taking antidepressant medications.

#### Herbs

## St. John's wort (Hypericum perforatum)

St. John's wort may be as effective as tricyclic antidepressants, but with fewer side effects. Reported side effects include gastrointestinal complaints, fatigue, oversensitivity to sunlight. Because of potential adverse interactions, St. John's wort should not be taken in conjunction with other antidepressants or with certain medications, including indinivir (a protease inhibitor used for HIV), oral contraceptives, theophylline, warfarin, digoxin, reserpine, cyclosporine, and loperamide. following are a few examples of herbs that may be recommended by professional herbalists for depression or its related symptoms:

- Valerian (Valerian root officinalis)-may improve symptoms of insomnia associated with depression
- Damiana (Turnera diffusa)—may reduce dysfunction sexual associated with many antidepressant medications
- (Panax ginseng)-may Ginseng help the body resist stress

#### Acupuncture

Electroacupuncture may reduce symptoms of depression as effectively as amitryptiline, antidepressant medication. tricyclic Electroacupuncture involves the application of a small electrical current through acupuncture needles.

#### Homeopathy

- Ignatia -- for a sudden sense of grief or disappointment following the death of a loved one, the end of romantic relationship, unexpected loss of one's job; this remedy is most appropriate for individuals who are very sad and have frequent crying spells
- Natrum muriaticum -- for grief following the death of a loved one or sadness from the end of a romantic relationship; this remedy is most appropriate for individuals who grieve silently and desire to be alone, avoid being comforted, and are reluctant to cry in public

## Massage and Physical Therapy

Giving massage may also be beneficial for are depressed. Elderly who volunteers with depression showed notable improvement in their symptoms when they massaged infants.

Aromatherapy, or the use of essential oils in massage therapy, may also be of value as a supplemental treatment for depression. Theoretically, the smells of the oils elicit emotions through the system. Essential oils used during massage for depression are quite varied and include:

- Basil (Ocimum basilicum)
- Orange (Citrus aurantium)
- Sandalwood (Santalum album)
- Lemon (Citrus limonis) .
- Jasmine (Jasminum spp.) .
- Sage (Salvia officinalis)
- Chamomile (Chamaemelum nobile)
- Peppermint (Mentha piperita)

#### Mind/Body Medicine

Mind/body therapies and techniques that may be useful as a part of an overall treatment regimen for depression include:

**Psychotherapy** 

Cognitive-behavioral therapy is a type of psychotherapy in which individuals learn to identify and change distorted perceptions about themselves and adapt new behaviors to better cope with the world around them. This therapy is frequently considered for people with mild to moderate depression, but it may not be recommended for those Cognitivedepression. with severe

behavioral therapy is at least as effective as tricyclic antidepressants. Compared to those treated with antidepressants, people treated with cognitive-behavioral therapy demonstrated similar, or better, results and lower relapse rates. Other therapeutic approaches that may be applied by a psychiatrist, psychologist, or social worker include:

- Psychodynamic psychotherapy based on Freud's theories about unresolved conflicts in childhood and depression as a grief process
- Interpersonal therapy acknowledges childhood roots of depression, but focuses on current problems contributing to depression; considered very effective treatment for depression
- Supportive psychotherapy nonjudgmental advice, attention, and sympathy; this approach may improve compliance with taking medication

#### Relaxation

Relaxation techniques, such as yoga and tai chi, may improve symptoms of depression in people with mild depression.

#### Meditation

Mindfulness meditation may prevent depression from recurring in people who once had the condition.

#### **Other Considerations Pregnancy**

- Postpartum depression is experienced by 8% to 20% of women following delivery.
- The safety of SSRIs and tricyclic antidepressant medications during pregnancy remains uncertain. The physician will provide guidance regarding use or avoidance of antidepressants during pregnancy. The risks and benefits to the mother and the fetus must be weighed in each individual case in order to determine the most appropriate regimen during pregnancy. MAOIs cause birth defects and should be avoided during pregnancy.
- The dietary supplements and herbs mentioned here have not been tested

for safety during pregnancy, and should therefore be avoided.

#### **Warnings and Precautions**

- SSRIs should be avoided in people with Parkinson's disease.
- Tricyclic antidepressants should be avoided in people with coronary artery disease.
- Several herbal remedies supplements should be combined with antidepressant medications. Be sure to inform your physician of all herbs and supplements you take to avoid adverse interactions.

#### **Prognosis and Complications**

Depression is a serious condition that can have a devastating effect on people's lives. It can directly and indirectly contribute to chronic medical conditions, such as heart disease and stroke, because depressed people with these conditions are less likely to engage in healthy behaviors (such as exercise) and more likely to engage in unhealthy behaviors (such as smoking). Suicide is a significant factor in depression; about 15% of people with major depressive disorder commit suicide. Depression also significantly shortens the life-span of the and is associated with development of memory impairment and dementia. When left untreated, depression can last up to 2 years. Rates of recurrence are variable: 50% of people who have had one depressive episode will have a second major depressive disorder; 70% will have a third and 90% will have a fourth. Symptoms depression usually disappear after menopause in women with premenstrual dysphoric disorder or seasonal affective disorder. Fortunately, there are several treatment options available for people with depression and the prognosis improves tremendously for those who seek treatment and comply with their regimen.

## 44.Dermatitis; Skin Disorders

Dermatitis (also called eczema) is an itchy inflammation of the skin. There are many types of dermatitis.

#### Signs and Symptoms

- · Itching, pain, stinging, or burning
- Blisters, thick or scaly skin, red skin, sores from scratching

#### What Causes It?

- Allergic reactions (for example, to poison oak or ivy)
- Low humidity or soaps and detergents
- Chemicals, such as nickel and cobalt
- Working with chemicals or wetting hands often
- Genetic make up

#### What to be done

Try to determine the cause of your dermatitis and make sure you have dermatitis and not a similar disease, such as psoriasis, skin cancer, or some psychological conditions.

#### **Treatment Options**

- Some corticosteroids, such as prednisone, are taken internally to reduce swelling. Others, such as hydrocortisone, are applied directly to the skin to relieve discomfort.
- Antihistamines relieve itching; some may also help you sleep.
- Antibiotics, either topical or in pill form, are prescribed if there is an infection.

# Complementary and Alternative Therapies Nutrition

Note: Lower doses are for children.

- Eliminate or reduce exposure to environmental or food allergens.
   Common allergenic foods are dairy, soy, citrus, peanuts, wheat (sometimes all gluten-containing grains), fish, eggs, corn, and tomatoes.
- Reduce pro-inflammatory foods in the diet including saturated fats (meats, especially poultry, and dairy), refined foods, and sugar.
- Increase intake of fresh vegetables, whole grains, and essential fatty acids (cold-water fish, nuts, and seeds).

- Flaxseed, borage, or evening primrose oil (1,000 to 1,500 mg one to two times per day) is anti-inflammatory. Children should be given cod liver oil (1 tsp. per day) or omega-3 oils (fish oils).
- Beta-carotene (25,000 to 100,000 IU per day), zinc (10 to 30 mg per day), and vitamin E (200 to 800 IU per day) support immune function and skin healing.
- Vitamin C (1,000 mg two to four times per day) inhibits histamine release. Rose hips or palmitate are citrus-free and hypoallergenic.
- Selenium (100 to 200 mcg per day) helps regulate fatty acid metabolism and is a cofactor in liver detoxification.
- Bromelain (100 to 250 mg two to four times per day) helps reduce inflammation.

#### Herbs

Flavonoids, a substance found in dark berries and some plants, have antiinflammatory properties, strengthen connective tissue, and reduce hypersensitivity. The following flavonoids may be taken in dried extract form.

- Catechin (25 to 150 mg two to three times per day), quercetin (50 to 250 mg two to three times per day), hesperidin (50 to 250 mg two to three times per day), and rutin (50 to 250 mg two to three times per day).
- Rose hips (Rosa canina) are also high in flavonoids and may be used as a tea. Drink 3 to 4 cups per day.

The following herbs support skin healing and lymphatic drainage; use in combination as a tincture (15 to 30 drops three times per day) or tea (2 to 4 cups per day). Peppermint (Mentha piperita), red clover (Trifolium pratense), cleavers (Gallium aparine), yarrow (Achillea millefolium), and prickly ash bark (Xanthoxylum clava-herculis).

Sarsaparilla (Smilax species) helps heal hot, red, inflamed skin, and gotu kola (Centella asiatica) is good for dry, scaly, crusty skin. Use 3 ml sarsaparilla and 2 ml gotu kola tincture daily, or 3 cups tea per day. Oregon grape (Mahonia aquafolium) or red alder bark (Alnus rubra) taken as tincture (20 to

30 drops three times a day) helps the liver process waste.

Creams and salves containing one or more of the following herbs may help relieve itching and burning, and promote healing. Chickweed (Stellaria media), marigold (Calendula officinalis), comfrey (Symphytum officinale), and chamomile (Matricaria recutita). Peppermint leaf tea may be cooled and applied to relieve itching and burning. An external menthol ointment can also help.

#### Homeopathy

- Apis mellifica for hot, swollen vesicles
- Rhus toxicodendron for intense itching and burning

Urtica urens for burning, stinging pains

### Acupuncture

Acupuncture may help restore normal immune function and reduce the hypersensitivity response.

#### Massage

Massage may help to reduce stress, which makes dermatitis worse.

#### Follow up

Carefully avoid whatever gives you dermatitis and prevent infection and scarring by not scratching.

#### Special Considerations

Check with your provider before using any medication if you are pregnant.

#### 45. Diabetes Mellitus

Diabetes mellitus is a chronic condition associated with abnormally high levels of glucose in the blood due to absolute or relative deficiency of insulin. If left untreated, diabetes can lead to blindness, kidney disease, nerve disease, heart disease, and stroke.

There are two major types of diabetes mellitus:

- Type 1—Also known as insulindependent diabetes mellitus (IDDM), type 1 diabetes is an autoimmune disease in which the pancreas produces little insulin. Individuals with type 1 take insulin diabetes must throughout their lives to manage their condition. Type 1 diabetes usually occurs most children and young adults and it accounts for 5% to 10% of all diabetes cases.
- of diabetes (accounting for 90% of all cases), type 2 diabetes (NIDDM) is a metabolic disorder resulting from the body's inability to make enough, or properly use, insulin. It occurs most frequently in people who are overweight, inactive, and older than 40 years of age. Most people with type 2 diabetes—about 60% to 70%—do not need to take insulin to manage their condition.

Gestational diabetes is a type of diabetes that can develop when a woman is pregnant.

Towards the end of a pregnancy (usually the third trimester), a woman may have higher than normal levels of glucose in her bloodstream. Although it usually disappears after delivery, the mother is at increased risk of developing type 2 diabetes later in life. Other types of diabetes are associated with genetic syndromes, surgery, drugs, malnutrition, infections, and other illnesses.

## Signs and Symptoms

## Type 1

While production of insulin diminishes gradually over a matter of years, the signs and symptoms of type 1 diabetes tend to appear abruptly, once 80% to 90% of the pancreatic cells can no longer make insulin. The signs and symptoms include:

- Excessive urination
- Excessive intake of water and/or food
- Loss of bladder control in children after they had already been trained
- Unintended weight loss over several days (people with type 1 diabetes tend to be thin)
- High levels of glucose in the blood and urine
- Nausea and vomiting
- Abdominal pain or discomfort
- Weakness and excessive fatigue
- Increased susceptibility to infection, such as vaginitis and other yeast infections
- Dehydration
- Blurred vision

and/or • Irritability, restlessness, apathy

Ketoacidosis —a potentially fatal condition marked by accumulation of ketones and increased acidity of the blood

Type 2

People with type 2 diabetes often have no symptoms, and their condition is detected only when a routine exam reveals high blood glucose levels. Occasionally, a person with type 2 diabetes may experience symptoms listed below, which tend to appear slowly over time:

- Numbness or burning sensation of the feet, ankles, and legs
- Blurred or poor vision
- Impotence
- Fatigue
- Poor wound healing

In some cases, symptoms may mimic type 1 diabetes and appear more abruptly:

- Excessive urination and thirst
- Yeast infections
- Whole body itching
- Coma-in severe cases, high blood affect water glucose may distribution in brain cells, causing a state of deep unconsciousness, or coma.

#### Causes

People with type 1 diabetes produce little or no insulin at all because their immune systems attack and destroy the insulinproducing beta cells in the pancreas. In type diabetes, beta cells are destroyed gradually, but symptoms do not appear until at least 80% of the cells are affected. Type 2 older, diabetes usually develops in overweight individuals who become resistant to the effects of insulin over time. When type 2 diabetes is diagnosed, the pancreas is usually producing enough insulin but, for unknown reasons, the body cannot use the insulin effectively- condition called insulin resistance. In people with type 2 diabetes, production of insulin by the pancreas also tends to diminish.

#### Risk Factors

#### Type 1

- Family history of type 1 diabetes
- Mother who had preeclampsia (a condition characterized by a sharp

increase in blood pressure during the third trimester of pregnancy)

- Family history of autoimmune including diseases. Hashimoto's thyroiditis, Graves' disease, myasthenia gravis, Addison's disease, or pernicious anemia
- Viral infections during infancy including mumps, rubella, coxsackie
- Child of an older mother
- Northern European Mediterranean descent
- Consumption of cow's milk during infancy (this idea is controversial however)

#### Type 2

- Family history of type 2 diabetes (one-quarter to one-third of all individuals with type 2 diabetes have a family history of condition)
- Age older than 40 years
- Excess body fat, particularly around the waist
- Sedentary lifestyle and high-fat, high-calorie diet
- Abnormal levels of cholesterol and/or trigylcerides in the blood
- High blood pressure
- History of gestational diabetes or syndrome polycystic ovary causes disorder that hormonal women to have irregular or no menstruation)
- Hispanic American, African American or Native American (particularly Pima tribe in Arizona) descent
- Low birth weight and/or a mother's malnutrition in pregnancy cause metabolic disturbances in a fetus that lead to diabetes later in the child's life

Diagnosis

All pregnant women should be screened for gestational diabetes during their trimester and people who are 45 years of older should have their blood glucose levels checked randomly every 3 years. Those who have a high risk of developing diabetes (such as people with a family history of the more disease)should be tested Different types of tests are used to diagnose diabetes-random plasma glucose, fasting plasma glucose, and oral glucose tolerance tests. Normal fasting plasma glucose levels are less than 110 milligrams per deciliter (mg/dL). People with fasting plasma glucose levels of more than 126 mg/dL (on two or more tests on different days) definitely have diabetes. If results from the fasting plasma glucose test are questionable (meaning glucose levels are between 111 and 126 mg/dL) and diabetes is still suspected, a glucose tolerance test will be ordered. In this test, three measurements of blood glucose are taken over 2 hours after 75 gm of sugar is ingested. If two of the measurements (or more) are at least 200 mg/dL, diabetes is diagnosed. Need physical exams every 3 to 6 months for signs of blood vessel, nervous system, eye, and kidney disorders. Blood and urine tests are generally performed as part of these followup appointments. Dieticians are also an integral part of care from the outset and during follow-up visits.

#### **Preventive Care**

Type 1

Interestingly, though, a recent study conducted in Finland suggests that adequate amounts of vitamin D, particularly in the first year of life, may decrease one's chances of developing type 1 diabetes within the first 30 years of life. Those given at least 2,000 IU of vitamin D per day (generally from cod liver oil) for the first year of life were significantly less likely to develop type 1 diabetes over a 30-year time course than infants who were given less than that.

Type 2

Considerable evidence from populationbased studies suggests that type 2 diabetes is highly preventable—particularly through management. exercise weight and Individuals who are physically inactive and/or overweight are much more likely to develop type 2 diabetes. Studies suggest that vigorous physical activity is not necessary in order to protect against the development of diabetes; moderate, regular exercise such as walking for 30 minutes most days of the week, is enough.

**Treatment Approach** 

The goal of diabetes treatment is to achieve and maintain blood glucose levels within or near the normal range (90 to 126 milligrams per deciliter [mg/dL]). A recent major study,

called the Diabetes Control Complications Trial (DCCT), found that diabetics who kept their blood glucose levels close to normal reduced their risk of developing major complications from the condition. Maintaining blood glucose levels is often very difficult, however. People with diabetes must learn how to manage their condition on a daily basis to prevent blood glucose levels from hypoglycemia or hyperglycemia. Treatment for diabetes requires a strict regimen that typically includes a carefully calculated diet, planned exercise, daily blood glucose testing at home, and, most importantly, multiple daily insulin injections. Similarly, healthy eating habits, physical activity, and daily blood glucose testing are the basic tools that people with type 2 diabetes need to manage their condition. Some people with type 2 diabetes (30% to 40%) also require insulin injections. Diabetes should use the following therapies to help manage their blood glucose levels and to prevent complications:

- Lifestyle changes, particularly in diet and exercise habits
- Medications , particularly insulin for individuals with type 1 diabetes and some people with type 2 diabetes
- Supplements , including fiber and chromium
- Relaxation techniques
- Acupuncture for pain from nerve damage

Lifestyle

People with diabetes can improve significantly from lifestyle changes—particularly diet and exercise. Type 2 diabetics can even eliminate the need for medications when they make adequate and appropriate lifestyle changes.

Diet

The American Diabetes Association (ADA) recommends that individuals with diabetes consume a healthy, low-fat diet, rich in grains, fruits, and vegetables. A healthy diet typically includes 10% to 20% of daily calories from protein (including poultry, dairy, and vegetable sources). fish, Diabetics who also have kidney disease with their work healthcare practitioners to limit protein intake to 10% of daily calories. A low-fat diet typically includes 30% or less of daily calories from fat—less than 10% from saturated fats and up to 10% from polyunsaturated fats (such as fats from fish). In addition, weight loss should be part of the plan for those with type 2 diabetes. Moderate weight loss (achieved by reducing calories by 250 to 500 per day and exercising regularly) not only controls blood sugars but blood pressure and cholesterol as well. Diabetics who eat healthy, well-balanced diets will not need to take extra vitamins or minerals to treat their condition.

#### Exercise

Exercise plays an important controlling diabetes because it lowers blood sugar and helps insulin to work more efficiently in the body. Exercise also cardiovascular enhances fitness improving blood flow and increasing the heart's pumping power. It also promotes weight loss and lowers blood pressure. Exercise only has value, however, when it is done regularly-at least three to four sessions per week for 30 to 60 minutes per session. People with type 2 diabetes who exercise regularly have been shown to lose weight and gain better control over their blood pressure, thereby reducing their risk for cardiovascular disease. People with type 1 diabetes who regularly exercise reduce their need for insulin injections.

Anyone with long-standing diabetes should undergo a thorough screening before beginning an exercise program and should be monitored carefully by his or her physician.

#### Medications

Medications for diabetes must always be used in conjunction with lifestyle changes, particularly diet and exercise, to improve the symptoms of diabetes.

#### Insulin

All individuals with type 1 diabetes must use insulin to control their blood glucose levels, and roughly 40% of those with type 2 diabetes also require insulin. Insulin is injected into the fat under the skin where it is absorbed directly by the blood. As an alternative to injections, an insulin pump can deliver insulin through a catheter in the tissue below the skin of the abdomen. The pump eliminates the need for injections and

offers better control of blood sugar. Inhaled insulin is currently under investigation. Common types of insulin include:

- Short-acting (regular) insulinbegins working within 30 minutes after injection, works the hardest 2 to 4 hours later, and stays in the blood for about 4 to 12 hours
- Rapid-acting insulin—begins working within 15 minutes after injection, peaks 30 to 90 minutes later, and stays in the blood for as long as 5 hours
- Long-acting (NPH) insulin—begins working within 1 to 3 hours after injection, works the hardest 6 to 12 hours later, and stays in the blood for 18 to 26 hours

## Other medications used to treat diabetes include:

- Sulfonylureas (including glipizide, glyburide, and glimepiride)—also called oral hypoglycemic agents, lower blood sugar by prompting the pancreas to secrete insulin. These are most effective in individuals who still have some working beta cells in the pancreas. Side effects may include nausea, heartburn, and a feeling of fullness.
- Meglitinides (including repaglinide and nateglinide)—are taken with meals and reduce the elevation in blood sugar that generally follows eating; if these drugs are not taken with meals, blood sugar will drop dramatically and inappropriately.
- Biguanides (including metformin) lower blood sugar by improving the response to insulin by cells in the insulin diminishes body (this may effects Side resistance). nausea, weight loss, include abdominal discomfort, and diarrhea.
- Thiazolidinedione (including rosiglitazone and pioglitazone)—
  improves uptake of glucose by cells in the body; usually used with insulin; side effects include weight gain, anemia, edema (swelling), and liver damage.
- Alpha-glucosidase inhibitors (including acarbose and miglitol) medications in this class lower the

amount of sugar absorbed from the intestines, thereby reducing the rise in blood glucose that occurs after a meal. Side effects can include flatulence and interference with the body's absorption of iron.

#### Nutrition and Dietary Supplements Supplements with Glucose-Lowering Effects

#### Chromium

variety of Found in a foods supplements, including liver, brewer's yeast, cheese, meats, fish, fruits, vegetables, and whole grains, chromium appears to enhance the body's sensitivity to insulin. Chromium is believed to help insulin pull glucose from the bloodstream into the cells for energy. Chromium supplements may reduce blood glucose levels in individuals with type 2 diabetes and reduce the need for insulin in those with type 1 diabetes. The National Research Council estimates that intakes of 50 to 200 mcg per day are safe and effective.

#### Magnesium

Some experts believe that low magnesium levels worsen blood sugar control and that foods rich in magnesium (such as whole grains, green leafy vegetables, bananas, legumes, nuts, and seeds) or magnesium supplements may promote healthy blood glucose levels.

#### Fiber

- Prevent development of type 2 diabetes
- Lower average glucose and insulin levels in people who already have type 2 diabetes
- Improve cholesterol and triglyceride levels in those with diabetes

Studies have also shown that cholesterol levels improved in people with type 2 diabetes after they took supplements of a soluble fiber known as psyllium (*Plantago psyllium*).

#### Bezafibrate

A fibric acid derivatives used in addition to diet and exercise for the treatement of hypercholestraemia, characterized by high cholestrol, useful in reducing triglycerides and delays the onset of type 2 diabetes.

#### Vanadium

Vanadium is an essential trace mineral present in the soil and in many foods. It

appears to mimic the action of insulin and, in a number of human studies, vanadyl sulfate has increased insulin sensitivity in those with Type 2 diabetes.

#### Antioxidants

Antioxidants such as beta-carotene and vitamin C are scavengers of free radicals. People with diabetes have elevated levels of free radicals and lower levels of antioxidants. The following antioxidants may improve symptoms and reduce the risk of associated complications:

- Vitamin E
- Selenium
- · Zinc

Two additional substances that show preliminary evidence to possibly help control blood sugar include:

- Biotin (a B-complex vitamin) helpful for type 2 diabetes; brewer's yeast is a good source of biotin
- Vitamin B6—helpful for both type 1 and type 2 diabetes

Supplements with Cardiovascular Effects People with diabetes interested in trying the following supplements:

- Coenzyme Q10 (CoQ10)
- Niacin
- Omega-3 Fatty acids

In addition, the following antioxidants have been shown to improve cholesterol levels in people with type 2 diabetes:

- Beta-carotene
- Vitamin C (1000 mg per day)
- Vitamin E (800 IU per day)

Elevated manganese levels may help protect against LDL oxidation

Supplements that May Reduce Complications of Diabetes

The following antioxidant supplements may improve nerve communication in damaged areas and reduce the symptoms of diabetic neuropathy:

- Alpha-lipoic acid
  - Gamma-linolenic acid (evening primrose oil (*Oenothera biennis*) is a rich source)
  - Methyicobalamine.

#### Herbs

The plant extract guanidine, which lowers blood glucose, prompted the development and use of biguanides, a commonly used oral medication for diabetes. These include:

#### Aloe (Aloe vera)

Studies suggest that aloe vera taken orally might help reduce blood glucose in individuals who have type 2 diabetes. The herb may prove to be a useful addition to the diet, exercise, and medication program for type 2 diabetics.

#### Black beans (Phaseolus vulgaris)

It is an amylase inhibitor that inhibits digestion of starch and absorption of glucose. It can be effectively used in all obese patients to reduce and control excess fat and thus lowering the risk of heart, liver, gall bladder diseases, diabetes, arthritis, breathing disorder, problem with conception etc and other problems associated with obesity.

#### Gardenia jasminoides

An extract of the gardenia fruit, which is used in traditional Chinese medicine, could provide a new lead in the search for drugs to treat the symptoms of type 2 diabetes. The extract contains a chemical that apparently reverses some of the pancreatic dysfunction that underlies the disease. This compound (genipin) was previously found to cross-link proteins, but it has also now been shown to inhibit the enzyme uncoupling protein 2 (UCP2) through another mechanism. In both animals and humans, high concentrations of UCP2 appear to inhibit insulin secretion from the pancreas and increase the risk of type 2 diabetes.

## Fenugreek seeds (Trigonella foenum graecum)

Fenugreek seeds, a spice found in many curry preparations, are high in fiber and have been shown to regulate glucose and improve lipid levels in both animals and humans. In type 1 or type 2 diabetes, fenugreek seed powder lowered blood glucose and improved levels of blood cholesterol and trigylcerides, among other beneficial effects.

### American ginseng (Panax quinquefolium)

Although both Asian (Panax ginseng) and American (Panax quinquefolium) appear to lower blood glucose levels, only American ginseng has been studied in scientific trials. People with type 2 diabetes who take American ginseng before or together with a glucose meal experience a reduction in glucose levels after they consume the meal.

#### Other Herbs

Numerous other herbs have been used traditionally to regulate glucose levels in the body. The following herbs are safe and effective for the treatment of diabetes:

- Onion (Allium cepa)
- Garlic (Allium sativum)
- Andrographis (Andrographis paniculata)
- Green tea (Camellia sinensis)
- Indian cluster bean (Cyamopsis tetgonolobus)
- Gurmar (Gymnema sylvestre)
- Bitter melon or karela (Momordica charantia)
- Tinospora gulancha (Tinospora cordifolia)
- Bilberry (Vaccinium myrtillus)

#### Acupuncture

Acupuncture may trigger the release of natural painkillers and reduce the debilitating symptoms of a complication of diabetes known as neuropathy.

#### Mind/Body Medicine

Stressful life events can worsen diabetes in several ways. Stress stimulates the nervous and endocrine systems in ways that increase blood glucose levels and disrupts healthful behaviors. Clinicians generally agree that long-term stress is likely to worsen diabetes and that biofeedback, tai chi, yoga, and other forms of relaxation may help motivate people with diabetes to change their habits in order to manage their condition.

#### **Other Considerations Pregnancy**

Diabetic women of child-bearing age should consult an endocrine specialist about the benefits of managing glucose levels before trying to conceive. Risk factors for developing diabetes while pregnant include:

- Modest weight gain prior to pregnancy (11 to 22 pounds or more)
- · Family history of diabetes
- Tobacco use
- African, Hispanic-American, Or Asian ancestry
- Age older than 50 at conception If dietary restrictions fail to improve glucose levels, a woman with gestational diabetes may need insulin. Oral diabetes medications should not be used during pregnancy.

**Prognosis and Complications** 

Generally, type 1 diabetes is associated with more complications than type 2 diabetes. Long-term complications of diabetes may include:

- · Heart disease and stroke
- Vision loss and blindness
- Kidney disease
- Neuropathy (nerve damage)
- Foot ulcers and infections

• Skin problems, including bruising, dryness, itching, hair loss, warts, gangrene, and skin ulcers

Insulin is not a cure for diabetes, its discovery was the first major breakthrough in diabetes treatment. Today, it is also understood that for people with diabetes, healthy eating and exercise habits, daily glucose monitoring, and appropriate medication are key elements for a long, healthy life.

#### 46.Diarrhea

Diarrhea is an increase in the wateriness, volume, or frequency of bowel movements. Although uncomfortable, most diarrhea is not serious and will go away in a few days without treatment.

#### Signs and Symptoms

Diarrhea is a symptom of another ailment and experience with diarrhea include the following.

- Frequent need to defecate
- · Abdominal pain, cramping
- Fever, chills, general sick feeling
- Weight loss

#### What Causes It?

Most diarrhea is caused by an infection (viral, bacterial, or parasitic) or intestinal disorders such as inflammatory bowel disease. Another common cause is food poisoning. Eating local food and drinking local water during foreign travel can result in "traveler's diarrhea."

#### What to be done

Check dehydrated and may feel abdomen to see if it is tender, listen to abdomen with a stethoscope, and give a rectal exam.

### **Treatment Options Drug Therapies**

There are various drugs to treat symptoms of diarrhea. Suggest the following drugs for diarrhea:

- Opioid derivatives: diphenoxulate with atropine sulfate, and loperamide
- Adsorbents: Bismuth salt (for traveler's diarrhea) and attapulgite
- Bulk-forming medications: psyllium husk

#### Complementary and Alternative Therapies Nutrition

- Avoid coffee, chocolate, dairy products, strong spices, and solid foods. Introduce clear soup, crackers, white bread, rice, potatoes, applesauce, and bananas, as diarrhea gets better.
- Rice or barley water, fresh vegetable juices (especially carrot and celery), miso broth, or other clear broths help restore proper fluid and electrolyte balance. Make rice and barley water using 1 cup of raw grain to 1 quart of boiling water. Let steep for 20 minutes. Strain and drink throughout the day.
- Lactobacillus taken as powder or in capsules helps normalize bowel flora and may help cure your diarrhea. Take as directed.
- Glutamine (3,000 mg three times per day) is helpful in treating diarrhea that is caused by irritation of the intestinal lining rather than infection.

#### Herbs Swelling reducers:

- Quercetin (250 to 500 mg two to four times per day)
- Chamomile (Matricaria recutita)
- Marshmallow root (Althea officinalis) as cold-water tea. Soak 2 tbsp. root in 1 quart of water overnight. Strain; drink throughout the day.

#### **Infection fighters:**

- Barberry (Berberis vulgaris) 250 to 500 mg three times per day
- Goldenseal (Hydrastis canadensis) 250 to 500 mg three times per day
- Licorice root (Glycyrrhiza glabra). Do not take if you have high blood pressure.

#### Antidiarrheal herbs:

- Blackberry leaf (Rubus fruticosus) or raspberry leaf (Rubus idaeus) 1 heaping tsp. per cup. Drink 1/2 cup per hour.
- Carob powder; use 4 tsp. per 4 oz. of water or mix in applesauce. Take ½ to 1 tsp. every 30 to 60 minutes.
- Slippery elm powder (Ulmus fulva) marshmallow powder root (Althaea officinalis); use 1 powder to 1 quart of water. Make a paste with the powder and a small amount of water. Gradually add in the rest of the water and then simmer down to 1 pint. Take 1 tsp. every 30 to 60 minutes.

#### Homeopathy

- Arsenicum album for foulsmelling diarrhea from food poisoning or traveler's diarrhea with burning sensation in the abdomen and around the anus; this remedy is most appropriate for individuals who feel exhausted yet restless and whose symptoms tend to worsen in the cold and improve with warmth: vomiting may also Arsenicum may also be used to prevent diarrhea when traveling
- Chamomilla for greenish, frothy stool that smells like rotten eggs; primarily for children. especially those who are irritable, argumentative, and difficult console; commonly recommended for colicky or teething infants
- Calcarea carbonica for children who fear being in the dark or alone and who perspire heavily while sleeping; stools have a sour odor
- Mercurius for foul-smelling diarrhea that may have streaks of blood accompanied by a sensation emptying; incomplete remedy is most appropriate

- individuals who tend to feel exhausted following bowel movements, experience extreme changes in body temperatures, perspire heavily, and have a thirst for cold fluids
- Podophyllum —for explosive, painless diarrhea that gushing, becomes worse after eating or drinking; exhaustion often follows movements and individual for whom this remedy is appropriate may experience painful cramps in lower extremities; often in infants for diarrhea experienced from teething
- Pulsatilla for diarrhea that occurs after consuming too much fruit or rich, greasy food; stools are greenish in infants and of changing consistencies in older children
- Sulphur for irritable and weepy children; may have a red ring around the anus and diarrhea with the odor of rotten eggs
- Veratrum album for profuse, watery diarrhea accompanied by stomach cramps, bloated abdomen, vomiting, exhaustion, and chills; the diarrhea is worsened by fruit, and the individual craves cold liquids

#### Acupuncture

Acupuncturists treat people with diarrhea based on an individualized assessment of the excesses and deficiencies of qi located in various meridians. In the case of diarrhea, a qi deficiency is usually detected in the spleen meridian. As a result, acupuncture treatments often focus on strengthening this meridian. Moxibustion is frequently used in the treatment of diarrhea because its effect is thought to reach deeper into the body than needling alone.

#### Follow up

If diarrhea does not stop in three to five days, contact physician.

#### **Special Considerations**

Dehydration can cause to go into labor early. Also, the spasms that diarrhea causes may cause to have contractions. Do not take goldenseal (Hydrastis canadensis), barberry (Berberis vulgaris), or high doses vitamin A in pregnancy. Diarrhea can be serious, even fatal, for infants and elderly

people because of dehydration and the loss of electrolytes.

## 47.Diverticular Disease

A diverticulum is a sac-like bulge in the wall of the colon, the section of the large intestine that extends from the small intestine to the rectum. Most diverticula occur in the sigmoid colon, the curved part of the large intestine closest to the rectum. Diverticulosis is the presence of many diverticula along the bowel wall; this occurs more commonly as people get older and in countries where the diet is generally low in fiber. Diverticulitis occurs when one or more diverticula become inflamed; this inflammation may be local, confined to the area of the diverticulum, or may become more widespread to include the peritoneum, called peritonitis. Small (microscopic) or large perforations (holes in the bowel wall) occur in 15% to 20% of persons who have diverticula.

#### Signs and Symptoms

Often diverticula cause no symptoms, although a person may experience some irregularities in bowel habits. If symptoms do appear, they may include the following:

- Abdominal pain, especially pain low on the left side of the abdomen after a meal
- Either painless rectal bleeding or passing of blood in stool may occur
- Fever
- Nausea
- Vomiting
- Irregular bowel movements including constipation or diarrhea
- · Gas

Some people with diverticulitis develop fistulas, or abnormal passageways from the intestines into the abdomen or to another organ such as the bladder. Some people develop peritonitis. Symptoms of peritonitis may include sudden abdominal pain, muscle spasms, guarding, and possibly sepsis, the term for an infection that has spread to the blood.

## What Causes It?

These include aging, the movement of waste through the colon, changes in intestinal pressure, a low-fiber diet, and anatomic defects.

#### Who's Most At Risk?

These factors increase the risk for developing diverticular disease:

- Low-fiber diet
- Advanced age
- Obesity
- Male gender, for diverticulitis

The following may contribute as well:

- High fat intake
- Lack of regular physical activity

#### What to be done

Examine abdomen for tenderness, swelling, and guarding and may try to detect any unusual mass around the intestines. Take temperature and test blood, urine, and stool for signs of infection or blood. Computed tomography, a barium enema, ultrasound, and other imaging techniques may help locate diverticula and any inflammation, fistulae, abscesses, or other abnormalities. In some cases, providers may perform a colonoscopy, in which an endoscope is inserted through the anus and rectum and into the colon. This procedure helps to locate diverticula, detect the presence of any polyps, and determine the source of bloody stools.

## **Treatment Options**

#### Prevention

To help prevent diverticular disease:

- Eat a high-fiber diet (15 g of fiber per day). This helps stools move through the intestines and helps maintain proper pressure in the colon.
- If you have diverticula, avoid foods such as seeds that may block the opening of a diverticulum and lead to inflammation.
- Exercise regularly to decrease the occurrence of symptoms.

#### **Treatment Plan**

For mild symptoms, physicians may recommend a clear liquid diet and prescribe antibiotics. More serious cases may require hospitalization, intravenous feeding to rest the bowel, and intravenous antibiotics. Eating a high-fiber diet and taking psyllium supplements may help following an acute episode. Within six weeks, a colonoscopy or barium enema may be performed to check the condition of intestines. For repeated attacks recommend surgery.

#### **Drug Therapies**

A physician may prescribe antibiotics to fight infection, anticholinergies to relieve cramping, and analgesies to relieve pain.

#### Surgical and Other Procedures

- Colonoscopy with electrocoagulation.
   Electrocoagulation involves applying electric current to an area to stop bleeding. This may be necessary if problems with the structure of any arteries or veins contribute to the condition.
- Sigmoidectomy, or removal of the sigmoid colon. Unless there are complications, a surgeon can perform this operation laparoscopically.
- Hartman's procedure. In an emergency, this procedure may be used to detach the sigmoid colon from the rectum, close the rectum, and reconnect the sigmoid colon directly to an opening created on the surface of the body. It reduces the risk of sepsis and death. The procedure is reversed in a second operation within six months.
  - Angiography. This procedure may be used to inject medication directly into the arteries to control bleeding.

#### Complementary and Alternative Therapies Nutrition High-fiber Diet

- Population based studies suggest that eating a high-fiber diet helps prevent diverticular disease and other gastrointestinal disorders.
   Vegetarians are less likely to have diverticular disease, most likely because they tend to eat more fiber.
- The following foods were associated with a decreased likelihood of having diverticular disease: cucumber, lettuce, spinach, and brown bread. Beef and lamb

were associated with an increased risk of having diverticular disease. Eating more fiber and eating less red meat and fewer milk products may help reduce risk.

#### Glutamine

While specific nutrients that may have an impact on diverticular disease have not been studied as thoroughly as the high-fiber diet, glutamine supplements, which are thought to confer some degree of protection to the wall of the colon, may prove beneficial.

#### **Omega-3 Essential Fatty Acids**

Omega-3 essential fatty acids found in flax and cold-water fish help fight inflammation. For a condition such as diverticulitis, it may be wise to eat a diet rich in omega-3 fatty acids. This type of diet may also help prevent colon cancer.

#### Herbs

Many herbs are used for the general beneficial effects of their fiber content, specifically:

- Psyllium seed (*Plantago ovata*)recommended by the World Health Organization to relieve constipation related to diverticulitis.
- Flaxseed (Linum usitatissimum)may is helpful in treating
  diverticulosis. It works as a bulkforming laxative, softening stool
  and speeding transit time through
  the intestine. It also includes high
  levels of essential fatty acids.

#### Homeopathy

- Belladonna-used for abdominal pain and cramping that comes on suddenly and feels better with firm pressure; particularly helpful if constipation accompanies the pain
- Bryonia-used for abdominal pain that worsens with movement and is relieved by heat; particularly useful if vomiting and/or constipation with dry, hard stools accompanies the pain
- Colocynthis-used for sharp, cramping abdominal pains that improve with pressure; particularly useful if pain is accompanied by restlessness and diarrhea

#### Follow up

If develop a fever, tenderness in the abdomen, or bleeding from the rectum or in the stool, should alert physician right away. For fever higher than 101°F, worsening symptoms, signs of peritonitis, or increased white blood cell count found in laboratory tests, hospitalization will be considered and even encouraged by physician.

#### Prognosis/Possible Complications

About one-third of those who develop diverticulitis have a second episode, and of this group, half generally have a third attack. Twenty percent of patients develop complications after the first attack, 60%

after a second attack. Complications may include:

- An abscess (pocket of pus)
- Blocked intestine
- A perforation (hole) in the intestine leading to peritonitis, sepsis, and even shock
- Fistulas, which may also lead to sepsis
- Bleeding

Those who have experienced bleeding once are at high risk for developing bleeding again.

### 48. Dysphagia

Dysphagia difficulty is the swallowing, or the feeling that food is "sticking" in throat or chest. The feeling is actually in esophagus, the tube that carries mouth food from to stomach. dysphagia involves Oropharyngeal difficulty-moving food from mouth into upper esophagus. Esophageal dysphagia involves difficulty-moving food through esophagus to stomach. Dysphagia can affect at any age, although the likelihood increases as grow older.

#### Signs and Symptoms

The following are symptoms of oropharyngeal dysphagia.

- Difficulty trying to swallow
- Choking or breathing saliva into lungs while swallowing
- Coughing while swallowing
- Regurgitating liquid through your nose
- Breathing in food while swallowing
- Weak voice
- Weight loss

The following are symptoms of esophageal dysphagia.

- Pressure sensation in your midchest area
- Sensation of food stuck in your throat
- Weight loss
- Chest pain
- Pain with swallowing
- Belching
- Chronic cough

- Sore throat
- Bad breath

#### What Causes It?

Dysphagia in children is often due to malformations, conditions such as cerebral palsy or muscular dystrophy, or gastroesophageal reflux disease (GERD). Dysphagia in adults is often due to tumors, conditions that cause the esophagus to narrow, neuromuscular conditions, or GERD. Other causes include smoking, excessive alcohol use, certain medications, and teeth or dentures in poor condition.

#### What to be done

- In endoscopy or esophagoscopy, a tube is inserted into your esophagus to help your provider evaluate the condition of your esophagus, and to try to open any parts that might be closed off.
- In esophageal manometry, a tube is inserted into your stomach to measure pressure differences in various regions.
- In endoscopic ultrasonography, ultrasound is used to evaluate the condition of your esophagus.
- X rays of your neck, chest, or abdomen may be taken.
- In a barium swallow, moving picture or video X rays are taken of your esophagus as you swallow barium, which is visible on an X ray.

#### **Treatment Options**

Dysphagia generally is treated with drugs, procedures that open up the esophagus, or surgery. Treatment will depend on the cause, the seriousness, and any complications. In most cases can be treated without hospitalization as long as able to eat enough and have a low risk of complications. Infants and children with dysphagia are often hospitalized.

#### **Drug Therapies**

Liquid forms of medications may be necessary.

#### For spasms:

- Nitrates: nitroglycerin, isosorbide
- Anticholinergics: dicyclomine or hyoscyamine sulfate (do not take in cases of urinary disease, glaucoma, myasthenia gravis)
- Calcium-channel blockers: nifedipine, diltiazem
- Sedatives/antidepressants: diazepam, trazodone, doxepin
- Smooth-muscle relaxants: hydralazine

#### For esophagitis:

 Antacids, ulcers, and reflux treatments: cimetidine, ranitidine, nizatidine, famotidine, omeprazole, lansoprazole, metoclopramide

#### Complementary and Alternative Therapies Herbs

- Licorice (Glycyrrhiza glabra): reduces spasms and swelling and is a pain reliever specifically for the gastrointestinal tract. Do not take licorice for a long period of time or if you have high blood pressure. The dose is 380 to 1,140 mg per day. Chewable lozenges may be the best form of licorice for treating GERD.
- Slippery elm (*Ulmus fulva*): demulcent (protects irritated tissues and promotes their healing); dose is 60 to 320 mg per day. One tsp.

powder may be mixed with water and drunk three to four times a day. In addition, a combination of four of the following herbs may be used as either a tea or tincture. Use equal parts of the herbs, either 1 tsp. of each per cup of water and steep 10 minutes three times a day, or equal parts of tincture 30 to 60 drops three times a day.

- Valerian (Valeriana officinalis): improves digestion and helps you relax, especially if you feel anxious or depressed
- Wild yam (Dioscorea villosa): reduces spasms and swelling, especially where there is fatigue
- St. John's wort (Hypericum perforatum): relieves pain, depression
- Skullcap (Scutellaria lateriflora): antispasmodic, sedative, relaxant
- Linden flowers (*Tilia cordata*): antispasmodic, mild diuretic

#### Homeopathy

- Baptesia tincotria if you can swallow only liquids; especially with a red inflamed throat that is relatively pain-free
  - Baryta carbonica if you have huge tonsils
- Carbo vegatabilis for bloating and indigestion that is worse when lying down; especially with flatulence and fatigue
- Ignatia for "lump in the throat," back spasms, cough; especially when symptoms appear after you have experienced grief
- Lachesis if you cannot stand to be touched around the throat (including by clothing that is tight at the neck)

Follow up

Dysphagia should not limit activities, but restrict diet.

## 49. Eczema; Atopic Dermatitis; Skin Disorders

Eczema, also called atopic dermatitis, is a chronic, inflammatory skin disorder. Its main features are blisters that dry to become scaly, itchy rashes. The skin

becomes dry and itchy because too much moisture is lost from its upper layer. This leaves the skin without protection, making it easy for bacteria and viruses to penetrate.

The disease occurs episodically; there may be periods when symptoms are severe (flares) and times when there are no symptoms at all (remission). Eczema is not contagious, but nevertheless it is very common. People with eczema often have a personal or family history of allergic conditions like asthma or hay fever. There is no cure, but treatments can reduce symptoms and help prevent outbreaks.

#### Signs and Symptoms

- Dry, extremely itchy skin
- Blisters with oozing and crusting
- Redness of the skin around the blisters
- Raw areas of the skin from scratching which may even lead to bleeding
- Dry, leathery areas with more or less pigment than their normal skin tone (called lichenification)

Eczema in children under 2 years old generally begins on the cheeks, elbows, or knees. In adults, it tends to be located on the inside surfaces of the knees and elbows.

#### Causes

The cause of eczema is thought to be a combination of hereditary (genetic) and environmental factors. This means that factors such as allergies can cause eczema in susceptible people. Exposure to certain irritants and allergens in the environment can worsen symptoms as can dryness of the skin, exposure to water, temperature changes, and stress.

#### Risk Factors

- Young age-infants and children are most affected by eczema (about 65% of cases occur before age one, and approximately 90% occur before age 5)
- Skin exposure to harsh conditions
- Living in a climate with low humidity
- Personal and/or family history of allergies to plants, chemicals, or food
- Deficiencies of certain vitamins and minerals (for example, zinc)
- Stress can make eczema worse
   Irritants that may worsen eczema include:
  - Wool or synthetic fibers
  - Certain soaps and detergents as well as perfumes and some cosmetics

- Dust or sand
- Cigarette smoke

#### Diagnosis

A diagnosis made on both the appearance of the skin and on personal and family history. For adults, ask about stress in life, diet, drugs are taking; soaps and detergents use, and chemicals or materials may be exposed to at work, to find the cause of rash. A skin lesion biopsy may be performed, but is not always required to make the diagnosis.

#### **Preventive Care**

Control of stress, nervousness, anxiety, and depression may help prevent flares of eczema. Mind/body techniques that have shown some success include cognitivebehavioral therapy, autogenic training, and these two techniques combined with learning about eczema. Dietary restrictions that may help avoid flare-ups include eggs, fish, peanuts, and soy. A doctor, dietitian, or naturopath, for example, can help you make these dietary changes and determine if the lack of these foods in diet is reducing the incidence and severity of eczema. This is particularly true when the nursing mother has avoided cow's milk in her own diet. Babies whose mothers used probiotics during pregnancy and while breastfeeding were less likely to have eczema up to 2 years of age. Pretreatment of skin with creams containing omega fatty acids can reduce the severity of eczema or prevent eczema entirely.

#### **Treatment Approach**

The goals when treating eczema is to heal the skin, reduce symptoms, prevent skin damage, and prevent flares. Treatment may vary depending on age, symptoms, and general health. Developing skin care routines, identifying factors that trigger flares, and avoiding these triggers is a large part of any treatment plan.

#### Lifestyle

 Avoid anything that aggravates the symptoms, such as allergens and irritants to the skin. Common allergens include pollen, dust mites, and animal dander. Common skin irritants include wool, synthetic fibers, soaps and detergents, perfumes, cosmetics, lanolin, certain chemicals such as chlorine

- and solvents (including mineral oil), cigarette smoke, dust, and sand.
- Avoid scratching or rubbing affected areas
- Protect skin from rough clothing and irritants
- Be aware of emotional stress and try stress-reducing techniques
- Keep your environment cool, with stable temperature and humidity

Dry skin often makes the condition worse. Remember to:

- Avoid hot baths or showers; lukewarm water is best
- Wash or bathe as quickly possible to lessen water contact.
  - Use a mild soap or a nonsoap cleanser, or less soapthan usual.
  - Moisturize. After bathing, it is important to trap the moisture in the skin by applying lubricating cream on the skin while it is damp (within 3 minutes of bathing).

Parents can help their children by:

- Providing distractions to prevent them from scratching
- Keeping fingernails short to reduce chances of infection from scratching
- Being aware that there may well be social and emotional associated with visible skin lesions: additional support and encouragement may be needed

#### Medications

- Mild anti-itch lotions or topical corticosteroids--low potency corticosteroids and over-the-counter lotions may soothe less severe or healing areas, or dry scaly lesions
- Chronic thickened areas may be treated with ointments or creams that contain tar compounds, corticosteroids (medium to very high potency), and ingredients that lubricate or soften the skin.
- Systemic corticosteroids may be prescribed to reduce inflammation in some severe cases. In very rare instances, medications that suppress the immune system (called immunosuppressants such cyclosporine) may be considered in with extremely adults

- eczema who do not respond to oral steroids.
- Antihistamines may recommended for nighttime use to prevent nighttime scratching. These medications may cause drowsiness.
- New treatments--the latest treatment for eczema is a new class of skin medications called topical immunomodulators (TIMs). These medications are steroid-free. The most common are tacrolimus and ascomycin. Studies have shown as high as an 80% success rate using these new medications.

### Surgery and Other Procedures Phototherapy and Photochemotherapy

Treatment with ultraviolet light waves may effectively treat mild to moderate cases of eczema in children over age 12 and adults. If phototherapy is ineffective alone, it may be combined with a drug called psoralen. It is then called photochemotherapy.

#### **Nutrition and Dietary Supplements**

Paying attention (even keeping a diary) to what you) eat and the effect it has on skin (or your child's) may help you (or your child) avoid foods that provoke flares of eczema. Potentially provoking foods include peanuts, milk, soy, fish, and eggs. Foods high in saturated fats (like meat and full fat dairy) and trans-fatty acids (such as fried foods and hydrogenated oils) may stimulate inflammation as might sugar and highly processed foods. On the other hand, fresh fruits (particularly dark berries) vegetables, whole grains, and foods rich in omega-3 fatty acids (such as nuts, flax, seeds, and cold-water fish) may reduce inflammation in those without sensitivities to these foods.

#### Supplements to consider include: Gamma-linolenic acid (GLA)

GLA is an omega-6 essential fatty acid. GLA derived from evening primrose oil (EPO) is beneficial for relieving symptoms associated with this skin condition such as itching, redness, and scaling. Interestingly, preliminary studies show that pretreatment of skin with fatty acid-rich creams can reduce the severity of eczema or prevent eczema entirely.

#### **Probiotics**

Probiotics, or "good" bacteria, inhabit the intestines and protect against

proliferation of "bad" organisms that can cause disease. Studies suggest that gut bacteria in babies at high risk for allergic disorders may be different from that of other babies. Two well-designed studies of mother-infant pairs showed that babies of mothers who took probiotics while pregnant and breastfeeding were less likely to have eczema in the first two years of life. The most commonly used probiotics are Lactobacillus species.

#### Sulphur

Sulphur is found abundantly in keratin, a protein that strengthens hair, nails, and skin. Sulfur baths, and other forms of sulfur applied directly to the skin, seem to benefit eczema. Use of sulfur as a supplement is not currently recommended for children.

#### Zinc

Eczema is one of the symptoms of zinc deficiency, but there is no indication that oral supplementation with zinc helps treat eczema.

#### Others

Although evidence is limited or conflicting, the following may also be useful for eczema:

- Selenium
- Vitamin C

#### Herbs

Evening Primrose (*Oenothera biennis*) Oil Evening primrose seed oil (EPO) is used primarily to relieve the itchiness associated with certain skin conditions, including eczema. Results of studies regarding EPO for eczema are mixed. Similar to GLA, an omega-6 fatty acid that is derived from EPO, whether EPO relieves the symptoms of eczema may be very individual.

#### Lavender (Lavandula angustifolia)

Known mainly for its relaxing effects to aid with anxiety and insomnia, some herbal specialists prescribe oral lavender for skin conditions like eczema. In one study of topical lavender, however, children with eczema who received massage with or without lavender oil applied to the skin both did well. In other words, the improvement in the rash was related to the massage. To the extent that eczema is worsened by stress, it is possible that lavender adds some benefit by helping relax.

#### Others

- Burdock root (Arctium lappa) applied topically for skin inflammations
- German chamomile (Matricaria recutita) – may reduce inflammation and speed wound healing
- Goldenrod (Solidago virgaurea) –
   applied topically for wound healing;
   has anti-inflammatory properties
- Red clover (Trifolium pratense) –
  has anti-inflammatory properties
  and has been used as an ointment
  for this skin condition
- Roman chamomile (Chamaemelum nobile) – may ease discomfort associated with eczema
- Stinging nettle (Urtica dioica)

#### Homeopathy

- Calendula -- applied to the skin, particularly if the affected area is inflamed; this remedy soothes but does not cure the skin condition
- Sulphur -- for redness, burning, itching, and hot skin that tends to worsen with washing and scratching
- Urtica urens -- for large, red rashes (particularly those related to allergies) that itch and burn intensely
- Rhus toxicodendron -- used as a remedy for inflamed skin resulting from direct contact with an irritating substance; some homeopaths use it to treat eczema

#### Massage and Physical Therapy

One study evaluating essential oils for treating children with eczema concluded that massage with and without essential oils was effective in improving the dry, scaly skin lesions. Children with this scaly, itchy skin problem seem to experience less redness, scaling, and other symptoms if receiving massage between flares. Massage should not be used when this skin condition is actively inflamed. The essential oils most often chosen by the mothers in the study marjoram, frankincense, sweet were: German chamomile, myrrh, thyme, benzoin, spike lavender, and Litsea cubeba.

#### Exercise

The therapeutic effect of exercise may be related to the positive impact it has on the

emotions. Sports should be avoided during the worst stages of an outbreak.

#### Climatotherapy

Climatotherapy is the use of sunlight and water (such as the ocean) as therapy. The Dead Sea in Israel is known for its healing properties, and many people with eczema go there to sit in the sun and swim in the water.

#### Mind/Body Medicine

Flares of eczema are associated with anxiety and stress. Several studies have shown that relaxation techniques to reduce stress and anxiety can successfully decrease number occurrences of and relieve symptoms of eczema. Biofeedback seems to be a particularly useful technique.

#### Other Considerations

Starting an infant on solid foods conservatively and gradually may help prevent the food sensitivities that can cause eczema. Those who are allergic to ragweed, chrysanthemums, asters, echinacea, feverfew should avoid chamomile because it is in the same plant family.

#### Pregnancy

Avoid the use of burdock and sulfur during pregnancy.

#### Warnings and Precautions

Many of the Chinese herbal creams available in these countries have been tested and high amounts of steroid medications have been discovered. This is worrisome and potentially dangerous because the amount of the medication in such creams is not standardized or regulated. In a few rare instances, the use of oral Chinese herbs for eczema has led to kidney damage.

#### **Prognosis and Complications**

Although there may be complications of eczema such as bacterial infections of the skin and permanent scar formation, eczema is usually just an annoyance that is easily controlled with treatment and by avoiding irritants. Children with eczema, after a certain period of time, often go into remission for the rest of their lives, although skin may remain sensitive and dry.

### 50. Edema; Water Retention

Edema (also known as dropsy or fluid retention) is swelling caused by accumulation of abnormally large amounts of fluid in the spaces between the body's cells. It is a symptom rather than a disease or disorder. Widespread, long-term edema can indicate a serious underlying disorder.

#### Signs and Symptoms

- Swollen limbs (possibly accompanied by pain, redness, heat)
- Facial puffiness: abdominal bloating
- Shortness of breath. extreme difficulty breathing, coughing up blood
- Sudden change in mental state or coma
- Muscle aches and pains

#### What Causes It?

- Sitting or standing for long periods
- Certain medications
- Hormonal changes during menstruation and pregnancy
- Infection or injury to a blood vessel: blood clots; varicose veins
- Allergies to food or insect bites

- Kidney, heart, liver, or thyroid disease
- High or low blood pressure; high salt intake
- . Brain tumor or head injury
- Exposure to high altitudes or heat, especially when combined with heavy physical exertion

#### What to be done

Look for varicose veins, blood clots, wounds, or infections. An X ray, computed tomography scan, magnetic resonance imaging, urine test, or blood test may be necessary. Edema caused by organ failure or altitude sickness may hospitalization.

**Treatment Options** 

therapy (CDT) Complete decongestive involves compression bandages pressure "sleeves" tightened over swollen limbs to help force fluid through other channels for re-absorption by the body. Other options include a salt-reduction diet, daily exercise, resting with legs elevated above heart level, wearing support hose, and massage.

#### **Drug Therapies**

- Medication for underlying disorder
- Diuretics—for example, loop diuretics or potassium-sparing diuretics; reduce body fluid levels but also deplete important vitamins and minerals, which can result in loss of bone mass; various other possibly serious side effects
- Morphine—reduces congestion and anxiety with pulmonary edema

#### Surgical Procedures

Surgery may be required to remove fat and fluid deposits associated with a certain type of edema called lipedema, or to repair damaged veins or lymphatic glands to reestablish lymph and blood flow.

#### Complementary and Alternative Therapies Nutrition

- Eliminating food allergens from your diet decreases inflammation.
- A low-salt, high-protein diet may help edema. (However, you should not eat a high-protein diet if they have kidney disease.) and reduce intake of sugar and refined carbohydrates.
- If use diuretics, add more potassium to diet,
- Natural diuretics: asparagus, parsley, beets, grapes, green beans, leafy greens, pineapple, pumpkin, onion, leeks, and garlic.
- Vitamin B6 (50 to 100 mg per day) is a diuretic. The B vitamin thiamine may be supplemented (200 mg per day).
- Vitamins C (250 to 500 mg two times per day), E (400 to 800 IU per day), and coenzyme Q10 (50 to 100 mg two times per day)
- Potassium aspartate (20 mg per day) if you are using diuretics
- Magnesium (200 mg two to three times per day) and calcium (1,000 mg per day) help maintain fluid exchange in the body.

#### Herbs

Combine three of these herbs with equal parts of two to three additional herbs from the following categories, as indicated: cleavers (Galium aparine), yarrow (Achillea millefolium), oatstraw (Avena sativa), elder (Sambucus nigra), red clover (Trifolium pratense), and red root (Ceonothus americanus). For cyclic edema, such as swelling from menstruation:

- Ginkgo (Ginkgo biloba) strengthens the integrity of blood vessels.
- Bilberry (*Vaccinium myrtillus*) is a gentle diuretic.
- Topical applications of creams containing one or more of the following may help strengthen your blood vessels: horse chestnut (Aesculus hippocastanum), butcher's broom (Ruscus asuleatus), sweet clover (Melilotus officinalis), and rue (Ruta graveolens).

#### Homeopathy

Homeopathy may be useful as a supportive therapy.

#### **Physical Medicine**

- Dry skin brushing. Before bathing, briskly brush the entire skin surface with a rough washcloth, loofa, or soft brush. Begin at feet and work up. Always stroke in the direction of heart.
- Cold compresses made with yarrow tea.
- Contrast hydrotherapy involves alternating hot and cold applications. Alternate three minutes hot with one-minute cold. Repeat three times to complete one set. Do two to three sets per day.

#### Acupuncture

Acupuncture may improve fluid balance.

#### Massage

Therapeutic massage can assist with lymph drainage.

#### **Special Considerations**

Excessive fluid retention during pregnancy (toxemia) is potentially dangerous.

## 51. Encephalitis; Brain Inflammation, Viral Encephalitis

Encephalitis is an inflammation of the brain caused, most often, by a viral

infection. Exposures to viruses that cause encephalitis occur mostly through insect

bites. The virus enters through the blood stream and spreads to the brain, causing encephalitis and/or meningitis. Encephalitis is different than meningitis, but these two brain infections often occur together. The vast majority of individuals with encephalitis recover after a long period of time; inflammation may cause irreparable damage to the brain, bleeding within the brain, and death.

#### Signs and Symptoms

- 90% of people with encephalitis experience flu-like symptoms such as fever, sore throat, cough, and malaise
- If meningitis accompanies encephalitis, an individual may experience headache, stiff neck, intolerance to light, and/or vomiting
- A change in the level of consciousness, ranging from mild confusion to coma, develops in virtually all people with encephalitis; often includes disorientation and delusion with possible hallucinations, agitation, and personality changes
- Seizures occur in up to 50% of individuals with encephalitis
- Other signs and symptoms include an impaired ability to use comprehend words or coordinate voluntary muscle movements, muscle weakness or partial paralysis one side on of the body, uncontrollable tremors involuntary movements, and an inability to regulate body temperature

#### Causes

Arboviruses, or viruses carried by insects, are among the most common causes of viral encephalitis. Some of the major arboviruses include:

- Eastern equine encephalitis transmitted by mosquito; primarily affects individuals along the eastern seaboard; one-third of infected individuals die of the condition and many others suffer permanent brain damage
- European and Far Eastern (Russian) encephalitis – transmitted by ticks; although vaccine against this type

- of encephalitis is available in Europe, there is speculation that it may cause serious side effects
- Japanese encephalitis transmitted by mosquito; widespread in Asia; between 10% and 30% of infected individuals, primarily children, die of the condition
- La Crosse encephalitis transmitted by mosquito; primarily affects children under 16 years of age in the upper Midwestern United States; approximately 1% of infected individuals die of the condition.
- St. Louis encephalitis transmitted by mosquito; primarily affects individuals in rural Midwestern and southern United States; 7% of infected children and 30% of infected elderly die of the condition
- Venezuelan equine encephalitis transmitted by mosquito; primarily affects individuals in Central and South America; fatalities rare in humans but common in horses; epidemics in people occasionally occur after an outbreak in horses
- West Nile encephalitis transmitted by mosquito; primarily affects individuals in Africa and the Middle East, but outbreaks have also been recently recorded in the United States (New York City area and parts of New England); infections are most common in children and the elderly; as many as 10% of infected individuals die of the condition
- Western Equine encephalitis transmitted by mosquito; primarily affects individuals in western United States and Canada; usually causes a mild infection in people. except in children under 1 year of age, who often suffer permanent complications; 3% of infected individuals die of the condition.

Other viruses that commonly cause viral encephalitis include:

- Herpes simplex virus type (HSV1)
- Measles

- Enteroviruses (viruses that typically occur in the gastrointestinal tract)
- Mumps

Less common causes include:

- Cytomegalovirus
- Epstein-Barr virus (EBV)
- Human immunodeficiency virus (HIV)
- Varicella-zoster virus (VZV)
- Rabies virus

Viruses cause not all cases of encephalitis. Some nonviral causes of encephalitis include:

- Bacterial infection
- Fungal infection
- Parasitic infection
- Noninfectious causes, such as allergic reactions or toxins

#### **Risk Factors**

- Very young or very old age
- Exposure to mosquitoes or ticks
- Compromised immune system
- Not being immunized against measles, mumps, and rubella
- Traveling to areas where viral encephalitis is prevalent
- Handling potentially infected animals

#### Diagnosis

Encephalitis is a serious condition, so diagnosis and initial treatment usually take place in a hospital setting. After performing a physical exam, a physician may take the following steps to diagnose the condition:

- Blood test detects viruses in the blood
- Spinal tap detects viruses in the cerebrospinal fluid
- MRI and CT scan determines whether bleeding is present in the brain
- Electroencephalogram (EEG) detects abnormal brain waves

## **Preventive Care**

- Take protective measures when working or playing outside, such as using insect repellant and wearing long pants and long sleeves
- Immunize against viruses that lead to encephalitis with vaccines such as the measles, mumps, rubella (MMR), and rabies

- Maintain a balanced diet to keep the immune system healthy
- An infectious disease specialist may recommend a particular Japanese encephalitis vaccine for those traveling to Asia during the summer, but serious allergic reactions have been reported with its use

#### Treatment Approach

Generally, there are no specific medications to treat the viruses causing encephalitis. HSV1, VZV, and EBV are exceptions to this rule, however, as acyclovir is an excellent treatment. Often, people with symptoms of encephalitis are treated with this medication until the virus causing the condition is identified. Behavioral techniques, such as those used to treat individuals with traumatic brain injury, have been recently explored in the treatment of individuals recovering from the condition. Scalp acupuncture, combined with proper medication, may aid in the healing process. Careful observation and supportive care, including rest, proper nutrition, and fluids are a mainstay of treatment for encephalitis and allow the body to fight the infection.

#### Medications

- Acyclovir treats encephalitis caused by HSV, VZV, and EBV
- Ganciclovir or foscarnet treats encephalitis caused by cytomegalovirus and HSV1
- Anticonvulsant medications prevent and treat seizures associated with encephalitis

#### **Nutrition and Dietary Supplements Melatonin**

Melatonin may protect animals from serious complications associated with the condition and even increase their survival rates.

#### Herbs

#### Astragalus (Astragalus membranaceus)

Astragalus (Astragalus membranaceus), an herb used in Asia to improve weakness and to enhance immune function, may also protect humans from contracting viral encephalitis. This herbal mixture includes:

- Ginkgo (Ginkgo biloba)
- St. John's wort (Hypericum perforatum)
- Rosemary (Rosmarinus officinalis)

#### Acupuncture

Acupuncture delivered to the scalp may lessen the severity of such complications and reduce the symptoms associated with the condition. Some researchers theorize that scalp acupuncture is effective for individuals with encephalitis because all meridians converge at the head, and the method can stimulate and regulate throughout the entire body.

### Massage and Physical Therapy **Behavioral and Physical Training**

Recently, behavioral and physical training techniques have been explored in the treatment of individuals recovering from encephalitis.

#### Other Considerations Pregnancy

The most common cause of encephalitis in newborns is vaginal delivery from a mother who is infected with herpes simplex virus 2 (HSV 2). This infection in newborns is often severe and fatal. For this reason, cesarean section may be advised for pregnant women with a history of HSV 2, even if there is no sign of an active infection.

#### **Prognosis and Complications**

The most severe complications associated with encephalitis result from the destruction of nerve cells in the brain that do not regenerate. The severity of complications depends on the condition of the immune system and the infection causing the encephalitis. For example, 80% of those infected with encephalitis, have permanent neurological impairments (such as memory, speech, vision, hearing, muscle control, and sensation) and a very low survival rate. infected with EBV while those Venezuelan equine encephalitis rarely experience any serious complications. The long-term outlook for those with HSV encephalitis depends primarily on how quickly the condition is treated. Between 80% and 95% of individuals infected with viral encephalitis will survive the condition. but 20% will experience debilitating side effects or complications, such as memory loss or severe personality changes. The survival rate for those with encephalitis increases dramatically from 30% to 70% when the condition is detected early and treated with antiviral medications.

#### 52. Endocarditis; Heart Infection

Endocarditis is an inflammation of the endocardium, a membrane that covers connective tissue in heart valves and lines heart chambers. Most cases are caused by a bacterial infection. Endocarditis is a serious ailment that can lead to severe medical complications, and can even be fatal if not treated.

#### Signs and Symptoms

The most common symptom of endocarditis is fever. The fever may be high or low, and it may seem to come and go. Other common symptoms include the following.

- Skin sores
- Night sweats
- Chills
- Discomfort or uneasiness
- Muscle, joint, back pain
- Muscle weakness
- Stiff neck
- Headache
- Seizures
- Stroke

- Heart attack
- Difficulty speaking .
- Paralysis
- Numbness
- Cold, painful hands and feet
- Small purplish spots on skin
- Bloody urine
- Bloody phlegm
- Painful tips of fingers or toes
- Shortness of breath
- Cough
- Unnatural pallor

#### What Causes It?

Most of the causes of endocarditis are infection. related to a bacterial conditions that increase your risk include having mechanical heart valves, a previous case of endocarditis, heart defects and degenerative disease. Dental and surgical procedures that increase your risk of infective endocarditis include dental procedures that irritate the adenoidectomy, tonsillectomy, gums,

intestinal and respiratory surgery, gallbladder surgery, cystoscopy, bronchoscopy, and vaginal delivery with an infection present.

#### What to be done

Listen to heart and lungs, take pulse, and check eyes and skin. Order a number of tests, which could include blood tests, urine analysis, an echocardiogram, a computed tomography scan, and a cinefluoroscopy (a motion-picture type heart scan). In most cases, admit to the hospital, possibly in intensive care, until condition is better understood and symptoms are under control.

Treatment Options
Endocarditis is treated with antibiotics, almost always intravenously. In some cases,

surgery is also required.

**Drug Therapies** 

Infective endocarditis is usually treated with a combination of two or even three antibiotics, such as penicillin, gentamicin, vancomycin, cefazolin, ceftriaxone, nafcillin, oxacillin, rifampin, and ampicillin. Treatment generally takes two to six weeks.

Complementary and Alternative Therapies

Nutrition

- To support immune function, include vitamins C (1,000 mg up to three times a day), E (400 to 800 IU a day), A (10,000 IU/day) or betacarotene (100,000 IU a day), selenium (200 mcg a day), and zinc (30 mg a day).
- Coenzyme Q10 (100 mg twice a day) protects the heart.
- Magnesium (200 to 500 mg two to three times a day) for normal cardiac function. Do not take if you have kidney damage.
- Bromelain (250 to 500 mg three times a day between meals) is a proteolytic enzyme that may increase the effectiveness of antibiotic therapy.

#### Herbs

For long-term cardiac support combine the following herbs in a tea (3 cups per day) or tincture (30 to 60 drops three times a day): 2 parts hawthorn (Crataegus monogyna) with 1 part each motherwort (Leonurus cardiaca) and linden

- flowers (*Tilia cordata*). Use additional herbs from the following categories as needed.
- Cardiac arrhythmias: Add 1 part each lily of the valley (Convalleria majalis) and night-blooming cereus (Selenicereus grandiflorus) to the cardiac formula above. These herbs must be used with caution and under a physician's supervision.
- Hawthorn berry (*Crataegus laevigata*) can be helpful in decreasing arrhythmias. Use <sup>1</sup>/2 tsp. of the solid extract, or 1,000 mg three times per day.
- Infection: Combine equal parts of four to six of the following herbs: coneflower (Echinacea purpurea), goldenseal root (Hydrastis canadensis), wild indigo (Baptisia tinctoria), myrrh (Commiphora molmol), garlic (Allium sativum), and rosemary (Rosmarinus officinalis). For acute infection take 60 drops of tincture every two hours. For chronic infections or for prophylaxis, take 30 to 60 drops three times per day.
- Renal involvement: Combine equal parts of bearberry (Arctostaphylos uva ursi), cleavers (Galium aparine), dandelion leaf (Taraxacum officinale), black cohosh (Cimicifuga racemosa), yarrow (Achillea millefolium), and corn silk (Zea mays). Drink 3 cups per day.

#### Homeopathy

- Aconite if you fear death, have rapid heartbeat (tachycardia) with full, hard bounding pulse of sudden onset
- Cactus grandiflorus for endocarditis with mitral insufficiency. You may have a feeble, irregular pulse and feel a chest constriction.
- Digitalis if you have an irregular pulse with a sensation as if your heart would stop if you moved
- Spongia if you have a sensation of the heart swelling

#### Acupuncture

Acupuncture may help improve immunity and strengthen cardiac function.

#### Follow up

In addition to monitoring your condition while you are in the hospital, your physician will order follow-up procedures, such as blood tests, to determine how well the prescribed treatment is working.

#### 53.Endometriosis

Endometriosis occurs endometrial cells travel outside the uterus to other parts of body. These misplaced cells are stimulated by hormones, just like the cells within uterus, and bleed during menstruation. With each period, deposits build up and form scar tissue, which can be painful. It is found in 30 percent of infertile women.

#### Signs and Symptoms

One-third of women with endometriosis have no symptoms. The most common symptoms include the following.

- · Pelvic pain, especially when you have your period
  - Heavy or irregular menstruation
- Pain during sexual intercourse
- Infertility or miscarriage
- Pain with bladder bowel or function, or intestinal pain

#### What Causes It?

The cause is unknown, but there are three theories.

- . Abnormal functioning of immune system
- Retrograde (or reflux) menstruation, in which some menstrual blood flows backward through fallopian tubes
  - Genetic or heredity factors

#### What to be done

A physical examination may include gentle pushing on your abdomen and an internal examination. Definitive diagnosis is made with laparoscopy.

#### **Treatment Options**

Because there is no cure, treatment is to relieve symptoms.

#### **Drug Therapies**

The following drugs can relieve the symptoms of endometriosis.

- Nonsteroidal anti-inflammatory drugs (such as ibuprofen)
- Oral contraceptives
- Hormone-suppressing drugs (which stop menstruation)

#### Surgical Procedures

Laparoscopic laser techniques help shrink lesions. Total hysterectomy is recommended only when necessary but does not guarantee an end to symptoms.

#### Complementary and Alternative **Therapies**

Providing liver support is the backbone of alternative treatment.

#### Nutrition

- Eliminate all known food allergens.
- Eliminate alcohol. caffeine. chocolate. refined foods, food additives, sugar, and saturated fats (meats and dairy products).
- Eat organic only poultry and produce.
- Increase intake of whole grains, fresh vegetables, essential fatty acids, and vegetable proteins. Include liver-supporting foods such as beets, carrots, onions, garlic, leafy greens, artichokes, apples, and lemons.
- Vitamin C (1,000 mg three times per day) decreases inflammation.
- Zinc (30 to 50 mg per day) and beta-carotene (50,000 to 100,000 IU per day) support immune function and enhance healing.
- Vitamin E (400 IU per day) is necessary for hormone production.
- Selenium (200 mcg per day) is needed for fatty acid metabolism.
- supplementation Iron necessary if bleeding is severe.
- Calcium (1,000 to 1,500 mg per day) and magnesium (200 mg two to three times per day) are needed for hormone metabolism.
- Essential fatty acids (1,000 to 1,500 mg twice a day).

#### Herbs

Chaste tree (Vitex agnus cactus) is taken long term (12 to 18 months) for maximum effectiveness. Combine 2 parts of chaste tree with 1 part of two herbs from each category below. Drink 3 cups of tea per day or take 30 to 60 drops of tincture per day. For liver support (include milk thistle and one other herb): Milk thistle (Silybum marianum), dandelion root (Taraxacum officinale), vervain (Verbena officinalis), or blue flag (Iris versicolor). For reducing pelvic congestion: Squaw vine (Mitchella repens), motherwort (Leonurus cardiaca), red root (Ceonothus americanus), red raspberry (Rubus idaeus).

For management of severe pain and extensive endometriosis, Turska's formula is the preferred combination and should be used only under supervision.

#### Homeopathy

- Belladonna for menstruation with sensation of heaviness and heat
- phosphoricum for excessive periods with backache
- Chamomilla for heavy menses with dark clotted blood and pains
- racemosa for Cimicifuga unbearable pain radiating from hip to hip

#### Physical Medicine

Do not perform these therapies during menstrual flow.

- Contrast sitz baths. You will need two basins that can comfortably sit in. Sit in hot water for three minutes, then in cold water for one minute. Repeat this three times to complete one set. Do one to two sets per day, three to four days per week.
- Castor oil pack. Apply oil directly to abdomen, cover with a clean soft cloth and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes. Use for three consecutive days.
- Kegel exercises (contracting and releasing the pelvic muscles).

#### Acupuncture

may be helpful for Acupuncture endometriosis.

#### Massage

Therapeutic massage may help resolve pelvic congestion.

#### Special Considerations

Endometriosis often resolves pregnancy.

## 54.Erythema; Skin Disorders

Erythema is redness of the skin caused by increased blood flow to the capillaries. There are many causes and manifestations of erythema, including photosensitivity, erythema multiforme, and erythema nodusum. Photosensitivity refers to a skin reaction in response to the sun; it tends to occur when something, such as an infection or a medication, increases a person's sensitivity to ultraviolet radiation. Erythema multiforme is characterized by spots, blisters, or other lesions on the skin and usually results from a reaction to medications, infections, or illness. Erythema nodosum is a form of erythema that is accompanied by nodules, small round masses, typically on the arms and legs.

#### What Causes It?

Erythema multiforme:

Infection—primarily herpes simplex virus (HSV) and pneumonia caused by a particular type of organism called mycoplasma; influenza A and

- Epstein-Barr virus may also lead to erythema multiforme
- Medications-penicillin and other antibiotics such as a class containing sulfa; anticonvulsant medications; 5-fluorouracil used for certain forms of cancer
- Radiation therapy
- Cancer
- Chemicals

## Erythema nodosum:

- Infections-including tuberculosis and HSV
- Connective tissue disorders such as Pregnancy
- Ulcerative colitis
- Medications-oral contraceptives; a class of antibiotics containing sulfa

#### Who's Most At Risk?

Men are at greater risk than women for erythema multiforme.

- · Women, on the other hand, are at greater risk for erythema nodosum.
- Excessive sun exposure increases the risk for erythema multiforme.
- · Individuals with a family history of skin conditions have a greater chance of developing erythema multiforme or erythema nodosum.

## Signs and Symptoms

Erythema multiforme:

- · Malaise, fever, itching of skin (before lesions appear)
- Sudden outbreak of spots, bumps, and lesions (typically on knees, elbows, palms, hands, feet, and mouth; trunk in severe cases)
  - lesions (central lesion Target surrounded by concentric rings of normal and red skin)
  - Erythema infectiosum (caused by a virus and known as fifth disease)facial rash and rash on arms lasting about two weeks

#### Erythema nodosum:

- Malaise, fatigue, flu-like symptoms (before lesions appear)
- Clustures of nodules (small round masses) and lesions on shins, forearms, thighs, and trunk
- · Red, hard, painful lesions become soft and bluish, and fade to yellow and brown
- Joint pain
  - Arthritis

Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN), perhaps the most severe forms of erythema multiforme, are characterized by a different set of symptoms. Target lesions on the trunk, hacking cough, fever, and blisters around the mouth, eyes, nostrils, and anal and vaginal areas are the key symptoms of SJS. A person with TEN will have symptoms of SJS that eventually worsen to include peeling and detachment of the skin, pus-like infections, fluid loss, and even death.

#### What to be done

Physicians will perform a physical exam and may use procedures such as a skin biopsy, throat culture, blood test, or X ray to determine the type of erythema. Not only will these procedures help identify the type of skin condition, they may also reveal any

infections or medications that contributing to the symptoms. are

## Treatment Options

#### Prevention

Treat any underlying diseases and avoid any known triggers; it is also important to avoid being outside in the sun when taking certain medications that contribute to photosensitivity.

## Treatment Plan

Physicians will treat any underlying diseases, eliminate drugs that may contribute to symptoms, and take steps to control current symptoms. While mild cases may not require treatment, bed rest and medication may be necessary for more severe cases.

#### **Drug Therapies**

Physicians may prescribe various medications in the appropriate clinical setting, including:

- Antihistamines for itching
- Antibiotics to treat particular infections
- Antiviral medications such as acyclovir and valacyclovir
- Burrow's compresses—a solution . used to soothe skin conditions, particularly blisters
- Immune-suppressing drugs, such as azathioprine, have shown mixed results
- Intravenous immunoglobulin has been used experimentally for SJS and TEN
- Steroids—topical for particular skin lesions; oral prednisone to reduce symptoms of erythema nodosum and to prevent recurrence of erythema multiforme, although this use is controversial

#### and Alternative Complementary **Therapies**

and alternative Certain complementary therapies, though, help to:

- Reduce inflammation
- Boost the immune system
- Prevent infections

#### Nutrition

Carotenoids appear to be effective at preventing skin damage when taken orally with or without vitamin E prior to sun exposure. Carotenoids can be found in fruits

- and vegetables as well as supplement form; beta-carotene is one common type.
- Flavonoids, such as quercetin, may help reduce the likelihood of developing erythema because they prevent inflammation and strengthen connective tissue; this, however, is only a theoretical benefit that has not been studied scientifically.
- Melatonin appears to have a protective effect when used topically in a gel, lotion, or ointment, either alone or in combination with topical vitamin E prior to exposure to UV radiation from the sun
- Vitamin C seems to be protective against developing erythema when used prior to sun exposure in either topical or oral form, although only when used in combination with topical or oral vitamin E
- Vitamin E seems to be protective when used prior to sun exposure in combination with either vitamin C or melatonin
- Zinc was used in a study as adjunctive treatment for a severe form of erythema multiforme similar to TEN; five out of eight people treated with zinc in addition to standard medical treatment had added benefit from this oral supplement

#### Herbs

Green tea (Camellia sinensis) may against erythema protect caused by UV light because it antioxidants, like contains the micronutrients described entitled Nutrition; section protection, when taken prior to exposure to UV radiation, has been suggested by animal studies as well as a recent preliminary human study.

Herbs traditionally used to heal damaged skin, promote lymph circulation, and possibly treat the underlying cause of various skin conditions may be helpful. Some examples include:

- Burdock root (Arctium lappa) has been used topically for skin inflammation and wound healing
- Calendula (Calendula officinalis)
  has been used topically for burns,
  wounds, and other skin conditions;
  may be used as homeopathic
  remedy for these purposes as well
  - Goldenseal (Hydrastis canadensis)
     has been used for infections,
     including those causing skin lesions
  - Lemon balm (Melissa officinalis) can be applied to HSV lesions in the form of a cream or a wash
  - Licorice root (Glycyrrhiza glabra)
    has been used topically for viruses
    and connective tissue disorders;
    should not be used orally in the case
    of high blood pressure
  - Meadowsweet (Filipendula ulmaria) has been used for painful joints (as may be seen with erythema nodosum)
  - Milk thistle (*Silybum marianum*) for chemical causes of skin lesions
  - Slippery elm (*Ulmus fulva*) in combination with goldenseal root has been applied topically for treatment of open wounds
  - Yarrow (Achillea millefolium) has been applied topically for skin inflammation and wound healing.

#### Homeopathy

- Apis mellifica —for skin rashes that feel hot and dry and are sensitive to touch; may be accompanied by sore throat; symptoms are relieved by cool drinks and baths and worsened by heat and warm liquids; this remedy is most appropriate for individuals who often feel sad, disappointed, or even depressed; they tend to cry easily but may also be irritable and envious by nature; they're also distinctly not thirsty but may crave milk
- Calendula for burns and skin lesions that are fairly superficial; often used after the acute phase of the skin condition has subsided to aid in complete recovery
- Rhus toxicodendron used for blisters and vesicles accompanied by intense itching that worsens at

night and improves with the application of heat; this remedy is most appropriate for individuals who are generally restless and unable to get comfortable at night

• Sulphur —for skin disorders that are accompanied by fever and intense itching; this remedy is most appropriate for individuals who are thirsty, irritable while sick, lazy and messy under ordinary circumstances, and who describe a sensation of internal heat and burning; symptoms tend to improve with open, cold air and worsen with warmth

#### Massage

Massage should be avoided in cases of erythema because it may make any inflammation worse.

#### **Prognosis/Possible Complications**

When treated properly, signs and symptoms of erythema multiforme usually disappear in four to six weeks; symptoms of erythema nodosum, however, may reappear for up to two years. Symptoms of SJS typically disappear in a month, but when the

condition is not treated properly it may lead to blindness. Ten percent may die from more severe forms of SJS. Up to 40 percent of those with TEN may die of the condition. If the drug causing either SJS or TEN is identified and discontinued quickly, a person's chance of survival significantly improves.

#### Follow up

Physicians will monitor fluid and electrolyte levels, protein loss, and any organ damage. Persons with erythema multiforme may need treatment in a hospital burn unit if 20% or more of their body is affected.

#### **Special Considerations**

Erythema raises special issues related to pregnancy. If a pregnant woman develops erythema infectiosum (fifth disease), the virus can infect the fetus and cause fetal anemia, heart failure, hydrops, and even death. Studies have also shown that pregnancy may trigger erythema nodosum. Finally, certain medications must be avoided during pregnancy; physician will be able to direct care appropriately.

## 55.Fever Of Unknown Origin

When physician cannot diagnose the cause of a patient's temperature that reaches 101 degrees Fahrenheit on and off for at least three weeks, they call it a fever of unknown origin (FUO). If the fever persists, physician will continue to carry out tests to narrow down the causes. But in 5 to 15 percent of cases, they fail to find the reason for the fever. Research suggests that fever helps fight off infections, so treating the fever without knowing the cause might reduce the body's ability to deal with the possible infection.

#### Signs and Symptoms

- Fever of more than 101°F (38.3°C), either continuous or intermittent, for at least two weeks
  - Fever above 101°F whose cause remains unknown even after extensive diagnostic testing

#### What Causes It?

By carrying out a series of tests, physicians try to narrow down the list of possible reasons for a high temperature.

#### What to be done

He or she may ask questions about:

- Work, because some workplaces contain organisms that can cause fever
- Visited places recently. Locations overseas, and even areas like harbor diseases that can cause fever.

Physician will also examine closely, paying particular attention to skin, eyes, nails. lymph nodes, heart, and abdomen. Take Have an and urine samples. blood well as examination, ultrasound computed tomography (CT scan) and magnetic resonance imaging (MRI). If the cause of the fever still can't be found, doctor may want to inject with "labeled white blood cells." These are white blood cells radioactive a harmless compound. Once injected, the white blood cells travel to infected parts of body. The radioactivity allows seeing on an X ray just where they have moved and thus locate the infection responsible for fever. If that fails, doctor may want to perform minor surgery to take biopsy samples of, for example, liver or bone marrow.

## **Treatment Options**

Advices to rest and drink plenty of fluids, and May even take off medications for other ailments, because those medications may be causing fever. The most popular are acetaminophen and aspirin.

#### **Drug Therapies**

- Acetaminophen
- Aspirin and other nonsteroidal antiinflammatory drugs. Avoid aspirin for children and teenagers, as it increases the risk of Reye's syndrome.

In cases of infection, doctor may also prescribe an antibiotic, antifungal, or antiviral drug, depending on the cause of the infection.

## Complementary and Alternative Therapies

General immune support with nutrition and herbs may alleviate fevers.

#### Nutrition

- Eliminate alcohol, caffeine, refined foods, and sugar.
- Drink water or electrolyte replacement (sports) drinks.
- Vitamin C (250 to 500 mg two times per day), beta-carotene (15,000 to 50,000 IU per day), and zinc (10 to 30 mg per day) help your immune system work better and reduce inflammation.

#### Herbs

The following herbs may be helpful in reducing fever and improving immune

response: coneflower (Echinacea purpurea), yarrow (Achillea millefolium), white willow bark (Salix alba), lemon balm (Melissa officinalis), spearmint (Mentha spicata), catnip (Nepeta cateria), and elder (Sambucus nigra). Combine 1 part coneflower and 1 part white willow bark with equal parts of two or more herbs. Drink 3 to 4 cups per day, 2 to 4 oz. three to four times per day for children.

#### Homeopathy

- Aconitum -- for fever that comes on suddenly and alternates with chills, heat, and flushing of the face; the individual may be anxious and crave cold drinks
  - Apis mellifica -- for fever associated with alternating bouts of wet (sweating) and dry body heat
- Belladonna -- for sudden onset of high fever with hot, red face, glassy eyes, lack of thirst, and hot body with cold hands
- Bryonia -- for fever with symptoms that are aggravated by the slightest movement
- Ferrum phosphoricum -- for the first stages of a fever with a slow onset; this remedy is generally used if Belladonna is ineffective

#### Acupuncture

Acupuncture may be helpful in supporting immune function.

#### **Special Considerations**

Nutritional, herbal, and homeopathic treatments for fevers are generally safe in pregnancy, yet use with caution.

## 56.Fibromyalgia Syndrome (FMS)

Fibromyalgia syndrome (FMS) is characterized by pain in the muscles and bones, trouble sleeping (or waking up feeling tired), and multiple tender points on the body. FMS, while different for everyone who has it, tends to come and go throughout life. It is not deforming, degenerative, life threatening, or imaginary.

## Signs and Symptoms

- Fatigue
- Morning stiffness
- Paresthesia (tingling)
- Raynaud's phenomenon

- Skin sensitivity
- Headaches
- Psychological disturbances
- Pain after exertion
- Memory lapses
- Sleep disorders
- · Restless leg syndrome
- Dizziness
- Irritable bowel syndrome
- · Joint pain and swelling

#### What Causes It?

The tendency to get FMS may be inherited. Illness or physical trauma such as an accident often precedes FMS symptoms. patients report a history psychological problems, such as depression or anxiety.

#### What to be done

Although FMS does not show up in laboratory and imaging tests, we must perform them to rule out other causes of symptoms and will also perform a physical examination of joints.

#### **Treatment Options**

The goal is to help function as well as possible on a day-to-day basis. While it is probably not possible to completely relieve symptoms, medication and certain complementary and alternative therapies may help reduce symptoms.

#### **Drug Therapies**

- Sleep disturbances are often treated successfully with low doses of tricyclic antidepressants. Benzodiazepines may also be used.
- Psychological disturbances can be treated with tricyclic antidepressants and sedativehypnotics.
- Pain in the bones and muscles can treated with lidocaine procaine or with capsaicin (topically). Ibuprofen may also help briefly reduce muscle pain.

#### Complementary and Alternative **Therapies** Nutrition

- Eliminate all food allergens from the diet. Common allergenic foods are dairy, soy, citrus, peanuts, wheat, fish, eggs, corn, tomatoes. Try an elimination trial: Remove suspected allergens from the diet for two weeks. Reintroduce one food every three days. Watch for reactions such as gastrointestinal upset, mood changes, flushing, fatigue, and worsening symptoms. A rotation diet, in which the same food is not eaten more than once every four days, may reduce sensitivities.
- carbohydrate Decrease intake. increase protein and moderation.
- Eliminate inflammatory foods such as refined foods, sugar, saturated

- fats (meat and dairy products), alcohol, and caffeine.
- Eat whole foods such as vegetables, whole grains, fruits, protein, and essential fatty acids (cold-water fish, nuts, and seeds).
- Vitamin C (250 to 500 mg twice per day) reduces swelling and helps immune system function better.
- Coenzyme Q10 (50 to 100 mg one to two times per day) improves oxygen delivery to tissues and has antioxidant activity.
- Chromium picolinate (200 mcg with may meals) reduce reactive hypoglycemia, which may make symptoms worse.
- Magnesium (200 mg two to three times per day) with malic acid (1,200 mg one to two times per day) relieves pain and fatigue.
- 5-Hydroxytryptophan (100 mg three times per day) may help with depression and insomnia.
- B vitamins help reduce the effects of stress: B-complex (50 to 100 mg per day), niacinamide (100 mg per day), and B6 (100 mg per day).
- Melatonin (0.5 to 3 mg one time before bed) may help sleep.
- Zinc (30 mg per day) is essential for proper immune function.
- and choline Phosphatidyl phosphatidyl serine (300 mg per day) may help depression and improve memory.

#### Herbs

The following herbs may help increase resistance to stress and strengthen the Siberian system. immune schizandra (Eleutherococcus senticosus), berry (Schizandra chinensis), ashwaganda somnifera), (Withania (Centella asiatica), and astragalus (Astragalus membranaceus) are beneficial. Use ginseng alone or with equal parts of two to three herbs. Take 20 to 30 drops two to three times per day. These may need to be taken for four to six months for maximum alleviate pain and nervous tension include the following: black cohosh (Cimicifuga racemosa), kava kava (Piper methysticum), skullcap (Scutellarid passionflower lateriflora),

incarnata), lavender (Lavandula angustifolia), and valerian (Valeriana officinalis). Combine equal parts and take as a tincture 20 to 30 drops two to three times per day. Essential oils of jasmine, lemon balm, rosemary, and clary sage relieve nervous exhaustion and may be used in aromatherapy. Place several drops in a warm bath or atomizer, or on a cotton ball, and inhale.

#### Homeopathy

Homeopathy may be useful as a supportive therapy.

#### **Physical Medicine**

Two to four cups of Epsom salts in a warm bath can soothe aching muscles.

#### Acupuncture

Based on an individualized assessment of the excesses and deficiencies of qi located in various meridians. In the case of fibromyalgia, a qi deficiency is usually detected in the spleen and/or kidney meridians. Moxibustion is used to strengthen the entire energy system. Qualified practitioners may also advise persons with fibromyalgia on lifestyle and diet, and provide recommendations on the use of herbal medicines.

#### Chiropractic

Because fibromyalgia generally includes low back pain and/or neck pain (for which spinal manipulation is beneficial), chiropractors commonly treat people who have this condition.

#### Massage

Massage may reduce stress and improve circulation.

#### Follow up

Education and support groups may help to manage condition.

#### 57. Food Allergies

Two out of five people have allergies to certain foods. In point of fact, however, less than 1% has true food allergies. A food allergy occurs when the body's immune system reacts to otherwise harmless substances in certain foods. While most food allergies are mild, in some cases they can cause anaphylactic shock, a serious, sometimes life-threatening, reaction. Food allergies affect mostly young children. With the exception of peanut allergy, the majority of children outgrow their food sensitivities.

Signs and Symptoms

Symptoms of a true food allergy usually involve the skin and intestines and generally begin just after eating and not longer than two hours following ingestion of the particular food. Common symptoms include:

- · Hives, itching, or eczema
- Nausea and vomiting, stomach cramps, indigestion, or diarrhea
- Swelling of the eyelids, face, lips, tongue, throat or other parts of the body
- Wheezing, nasal congestion, or trouble breathing
- Lightheadedness, dizziness, or fainting

When the symptoms listed above are extreme, they can be life threatening. If you see the following signs of extreme allergic reaction or anaphylactic shock:

- Swelling of the throat and difficulty swallowing
- Difficulty breathing
- Rapid pulse
- Dizziness, lightheadedness or loss of consciousness
- · Blue color to the skin and nails

#### Causes

Foods frequently responsible for food allergies include:

- Shellfish (such as shrimp, crab, and lobster)
- Tree nuts (namely, walnuts, almonds, and pecans)
- Peanuts (which are legumes, not true nuts)
- Fruits (particularly strawberries, but also melons, pineapple, and other tropical fruits)
- Tomatoes
- Fish
- Food additives (such as dyes, thickeners, and preservatives; monosodium glutamate [MSG] is a common food allergy in this category)

Foods that may cause intolerance include:

- Wheat and other gluten-containing grains
- Cows milk and other dairy products
- Corn products

#### Risk Factors

- Family history of allergies increases risk of having allergies, including food allergies. If both parents have food allergies, you have a 75% chance of having one yourself; one parent, 30% to 40% and if neither parent has allergies, then you have a 10% to 15% chance.
- Excessive exposure to a particular food-for example, in Japan where rice is a staple, rice is a common food allergen; in Scandinavia the common allergen is codfish; in India, chickpeas.

#### Diagnosis

A comprehensive history will be taken to find out what symptoms experience after eating and how soon after eating they occur. Even if symptoms seem clearly related to a specific food, doctor may still want to do some tests to be sure that you have a true food allergy and to verify the food or foods responsible for allergic reaction. The food causing the allergy can sometimes be identified by:

- Elimination and re-challenging diet called elimination provocation diet) suspected foods are eliminated from the diet one at a time until the symptoms disappear. If there is still a question about what may be causing the symptoms, then individual foods are reintroduced one at a time to see if an allergic reaction develops. This method is not full proof but may be used to narrow the list of suspected foods.
- Skin testing in which a diluted amount of the food allergen is placed under the skin; if allergic, a raised, red skin lesion will appear, generally within 15 to 20 minutes.
- Blood tests (RAST and ELISA), which look for antibodies against the particular food allergens.

#### **Preventive Care**

Although there is no guarantee of success, guidelines from reputable health agencies suggest some steps parents can take to reduce their child's chances of having food and other allergies. If either or both parents have a personal or family history of allergy (for example, asthma, eczema, hay fever, perennial allergic rhinitis [allergy animals, dust mites, or molds]) following measures are recommended:

- Avoiding common allergenic foods, in particular peanuts and tree nuts. during pregnancy and the months of nursing—peanut protein, as well as components of cow's milk, eggs, and wheat, are secreted into breast
- Exclusive breastfeeding—give your baby only breast milk for the first 6 months of life; use hypoallergenic formulas to supplement breastfeeding if needed. In fact, the latest and largest study on the topic of breastfeeding and its relationship allergies, particular asthma, suggests that breastfeeding in the early months of life can prevent allergies until child is 2 years old. But, breastfeeding may lead to an increased risk of allergies once child is older than 2 years.
- Delaying giving infant solid food until 6 months of age
- giving child common Delaying allergenic foods as follows: dairy until age 1 year; eggs until age 2 years; peanuts, nuts, and fish until 3 years. Delaying foods allows the tract gastrointestinal child's mature.
- Once an allergy has developed, carefully avoid the offending food.

**Treatment Approach** 

The goals of treatment are reduction of symptoms and avoidance of future allergic reactions. Once the particular food allergy is identified, the best way to accomplish this is by not eating that food. Treatment at the time of a reaction varies with the severity and type of symptoms. Mild or localized symptoms may subside without treatment. Antihistamines are usually recommended to relieve mild itching, swelling, rash, runny

may provide some relief of rashes. Severe anaphylactic shock can come on suddenly and accelerate quickly; in this case, you must go to the hospital by ambulance immediately. In some instances, survival may depend on an injection of epinephrine (adrenaline). Avoiding the offending food is the best way to prevent future allergic reactions.

#### Lifestyle

- Avoid offending foods. Careful reading of all package ingredients (many foods are processed with peanuts, eggs, or milk products such as whey); calling ahead when eating out; and taking your own food with you on trips may be helpful.
- If you have a history of anaphylactic shock, you should keep a preloaded syringe of epinephrine with you. Doctor will teach and a close family member how to use it in case the need arises. Plus, you should wear a medical bracelet or necklace indicating particular food allergies.

#### Medications

- Antihistamines-for mild itching, swelling, rash, runny nose, or headache available both prescription and over the counter in many cold, sinus, and allergy include remedies. These cetirizine, diphenhydramine, clemastine, chlorpheniramine, fexofenadine, desloratadine, loratadine. and hydroxyzine, include effects Possible side drowsiness, irritability, dry mouth, and heart palpitations.
- Skin creams—to soothe rashes
- Epinephrine injection—for anaphylactic shock.

## Nutrition and Dietary Supplements Lactobacillus Acidophilus

L. acidophilus are bacteria that inhabit the intestines and vagina and protect against the entrance and proliferation of organisms that can cause disease. L. acidophilus may help to lower the risk of allergies, including food allergies.

#### Lipase

Lipase has been used to treat food allergies.

#### Vitamin C

Vitamin C may be helpful for allergic conditions such as food allergies. This application may be related to the ability of vitamin C to improve immune function.

#### Herbs

Each of these herbs might be considered because of its ability to treat either allergy in general or stomach symptoms:

- Chamomile, German (Matricaria recutita)
- Dandelion (Taraxacum officinale)
- Evening Primrose (Oenothera biennis)
- Flaxseed (Linum usitatissimum)
- Peppermint (Mentha x piperita)

#### Acupuncture

Acupuncture can help restore normal immune function.

#### Homeopathy

The effectiveness of homeopathic therapies, homeopaths may consider individualized remedies for the treatment of food allergy based on their knowledge and experience.

#### Other Considerations Pregnancy

Women who have a food allergy may be able to reduce the risk of allergy in their child by avoiding common allergenic foods during pregnancy and nursing.

#### Prognosis and Complications

Food allergies may cause symptoms ranging from mild abdominal discomfort to lifethreatening anaphylaxis. The avoidance of offending foods may be easy if the food is uncommon or easily identified.

## 58.Food Poisoning

Food poisoning is the result of eating microbes or toxins in contaminated food. Cases can affect one person or can occur as an outbreak in a group of people who all ate the same contaminated food.

While many cases are the result of bacteria, some cases can be the result of poisonous components of plants and animals.

Signs and Symptoms

Food poisoning from bacteria causes nausea, vomiting, abdominal cramping, and diarrhea. Specific bacteria may cause these signs and symptoms:

- Clostridium botulinum (C. botulinum, or botulism): weakness, blurred vision, sensitivity to light, double vision, paralyzed eye nerves, difficulty speaking, trouble swallowing, paralysis that spreads downward, respiratory failure, death
- C. botulinum in infants: impaired physical growth (failure to thrive), constipation, paralysis, sudden infant death
- Vibrio cholerae (V. cholerae, or cholera): stools that are liquid with a whitish tinge
- Salmonella spp., Shigella spp., and Campylobacter jejuni (C. jejuni): fever, chills, bloody diarrhea
- Escherichia coli (E. coli): hemorrhagic colitis (bleeding from inflamed large intestine)
- Yersinia spp.: symptoms similar to appendicitis; delayed immune reaction including arthritis and/or red, tender bumps under the skin (erythema nodosum); sometimes bloody stool

Mushroom poisoning causes red blood cell problems, stomach flu, delirium, vision difficulties, heart muscle problems, kidney failure, and death of liver tissue. It causes death in about half of the people affected unless treated right away. Fish poisoning causes nausea, vomiting, diarrhea, abdominal pain, dizziness, and headache. Specific types of fish can cause other signs and symptoms, such as:

- Scombroid poisoning: flushing (redness of the face and neck)
- Ciguatera toxicity: numbness or tingling around the mouth, feeling of loose teeth, impaired touch sensation of hot as cold and cold as hot, itching, muscle and joint pain, slow heart rate, low blood pressure; alcohol may cause symptoms to recur or become worse
- Puffer fish poisoning: numbness or tingling around the mouth, trouble coordinating movement, difficulty

- swallowing, excess saliva, twitching, loss of ability to talk, convulsions, paralysis that spreads upward, respiratory failure, death
- Shellfish poisoning: numbness or tingling around the mouth or in the arms and legs; trouble swallowing; difficulty speaking; death from anaphylactic shock, a severe allergic reaction

#### What Causes It?

Common bacterial toxins include:

- E. coli in undercooked hamburger, unpasteurized apple juice or cider, raw milk, contaminated water (or ice); can be spread from person to person
- Traveler's diarrhea (another form of E. coli) from fruits, leafy vegetables, unsanitary drinking water and ice made from this water, and imported cheese
- Listeria monocytogenes (L. monocytogenes) in cole slaw, dairy products, and cold, processed meats
- Salmonella spp. in poultry, beef, eggs, or dairy products
- Shigella spp. from raw vegetables or from cool, moist foods (such as potato and egg salads) that are handled after cooking
- Staphylococcus aureus (S. aureus) in protein-rich foods, especially ham, eggs, custard-filled pastries, mayonnaise, and potato salad, often from the hands of food handlers
- Bacillus cereus in uncooked grains, especially rice
- C. jejuni in raw milk and poultry
- C. botulinum in undercooked homecanned foods; in children under l year of age, mostly from honey but also from corn syrup
- Clostridium perfringens (C. perfringens) in meat and poultry dishes and gravies, mostly foods that were cooked more than 24 hours before eating and were not reheated well enough
- V. cholerae in bivalve (two-shelled)
  shellfish (such as mussels, clams, oysters, and scallops), raw shellfish, and crustaceans (such as lobsters, shrimp, and crabs)

 Yersinia in contaminated meats; less common in United States than other food poisonings; more common in Scandinavia

Common types of fish poisoning include the following:

- Scombroid poisoning from bacteria in dark meat fish (tuna, bonito, skipjack, mahi-mahi, mackerel) that are not refrigerated well
- Ciguatera poisoning in tropical fish (grouper, surgeonfish, snapper, barracuda, moray eel) that have eaten the plankton Gambierdiscus toxicus
  - Puffer fish poisoning from the organs and flesh of puffer fish
  - Poisoning from bivalve shellfish that feed on red tide (plankton)

Mushroom poisoning occurs from eating wild poisonous mushrooms, especially *Amanita phalloides*.

#### Who's Most At Risk?

Infants and the elderly are at greater risk for food poisoning. A person is also at greater risk if any of the following is true:

- Pre-existing medical condition, such as chronic kidney failure or diabetes
- Antibiotic or histamine-blocking medicines
- Sickle-cell anemia and other problems with red blood cells
- · Weakened immune system
- Travel in an area where contamination is more likely
- Food shortage

Listeriosis is most common in pregnant women, fetuses, and people with immune problems. When a fetus is infected with *L. monocytogenes*, the fetus may be born prematurely or die.

#### What to be done

Examine for signs and symptoms of food poisoning, such as stomach problems, and of dehydration. Ask about foods you have eaten recently. Tests of vomit, blood, and stool, and tests of any leftover food can identify the cause.

## Physician may also use these tests:

- Sigmoidoscopy to look for bleeding or sores
- Electromyography (measure electric impulses in the muscles) to check for botulism

 Lumbar puncture for signs and symptoms related to central nervous system disorders

#### **Treatment Options Prevention**

These steps can help prevent food poisoning:

- Be very careful to wash your hands and to clean any dishes or utensils when you are making or serving food.
- Promptly refrigerate any food you will not be eating right away.
- If you take care of young children, wash your hands often and dispose of diapers carefully so that bacteria can't spread to other surfaces or people.
- If you make canned food at home, make sure to follow proper canning techniques to prevent botulism.
- Don't feed honey to children less than I year of age.
- Don't eat wild mushrooms.
- When traveling where contamination is more likely, eat only hot, freshly cooked food.
   Drink water only if it's been boiled.
   Don't eat raw vegetables or unpeeled fruit.
- · Always refrigerate fish well.
- Don't eat tropical fish caught during blooms of poison plankton.
- Eat puffer fish only with chefs trained to cook it.
- Don't eat shellfish exposed to red tides.

#### Treatment Plan

Treatment is meant to help support recovery and relieve symptoms. In most cases, physicians do not prescribe antibiotics because they may prolong diarrhea. If the person has eaten certain toxins, the provider may take steps to empty and clean out his or her stomach and administer activated charcoal, which can absorb the remaining toxin.

#### **Drug Therapies**

Depending on the symptoms and the cause of food poisoning, a physician may prescribe drugs including these:

 Antibiotics, such as ampicillin; similarly, TMP-SMX, doxycycline, or ciprofloxacin, are given to prevent or treat traveler's diarrhea

- Antitoxin to neutralize toxins from C. botulinum
- Amitriptyline to control the numbness and tingling from ciguatera poisoning
- Apomorphine or ipecac syrup to cause vomiting and help rid the body of toxin
  - · Atropine for mushroom poisoning
- Diphenhydramine and cimetidine for fish poisoning
  - Mannitol for nerve-related symptoms of ciguatera poisoning

# Complementary and Alternative Therapies Nutrition

The following general nutritional guidelines may be helpful in the case of food poisoning:

- Drink plenty of fluids (to prevent dehydration)
- Drink barley or rice water (to soothe inflamed stomach or intestine)
- Lactobacillus acidophilus (for those taking antibiotics)

Advice more specific to food poisoning includes:

- Alpha-Lipoic Acid -- Several reports indicate that alpha-lipoic acid, an antioxidant commonly found in broccoli, spinach, and beef, may be helpful in the treatment of *Amanita* poisoning. The usual dose for the supplement form is 50 mg twice a day or 100 mg once a day.
- Coumarins -- Lab studies have shown that coumarins, substances found in many fruits and vegetables, may help stop the growth of E. coli.
   To prevent traveler's diarrhea, fruits and vegetables should be peeled, washed carefully, and preferably cooked before ingestion.

Many animal studies have investigated the use of vitamins, minerals, and supplements to treat food poisoning. The most promising include:

• Vitamin A -- Rats infected with Salmonella appeared to eliminate the bacteria from their bodies faster when pretreated with vitamin A They also gain more weight and have a greater immune response than placebo-treated rats.

- Calcium phosphate -- Calcium phosphate supplements may be protected from infection by Salmonella enteritidis poisoning.
- Fish Oil -- In a study of mice infected with the bacteria, Listeria, animals that regularly consumed diets rich in fish oil had significantly more bacteria in their spleens than animals that consumed diets rich in lard or soybean oil. Until researchers can determine what these results mean to humans, people who have Listeria infection should avoid foods containing fish oil.

#### Herbs

Use of the following for people with a specific food poisoning is well documented:

• Milk Thistle (*Silybum marianum*) is one of the most effective herbs for liver disorders and is widely used in Europe to treat *Amanita* mushroom poisoning. Studies have shown that patients with *Amanita* poisoning can be effectively treated with silibinin up to 48 hours after eating the deadly mushrooms.

Chinese and Japanese combination herbal remedies used for *L. monocytogenes* support the traditional use for this type of food poisoning. A few of the active ingredients include:

- Asian ginseng (Panax ginseng)
- Astragalus root (Astragalus membranaceus)
- Chinese cinnamon bark (Cinnamomum aromaticum)
- Ginger root (Zingiber officinale)
- Licorice (Glcyrrhizae glabra)
- Peony root (Paeonia officinalis)

• Skullcap (Scutellaria lateriflora)
Laboratory studies suggest that the following substances have activity against particular organisms that may cause food poisoning:

- Bittervine (Mikania micranthu) A plant extract from a traditional Jamaican folk medicine shows activity against several types of bacteria, including S. aureus and E. coli.
- Tea Tree Oil (Melaleuca alternifolia) -- Lab studies have

shown that the essential oil of the tea tree has activity against E. coli.

• Thyme -- The essential oil of thyme (*Thymus vulgaris*) has killed the bacteria *Salmonella typhimurium*; additional lab studies also suggest that thymol (a part of thyme oil) has activity against *S. aureus*.

Thyme is available in a dried herb and is used to help digestion and to treat symptoms of gastritis; however, it is not known whether the dried herb would have the same activity as the oil against the bacteria mentioned.

Barberry (Berberis vulgaris) has also been used traditionally to treat diarrhea from infectious causes such as E. coli and V. cholera and, therefore, may help ease this symptom in some people with food poisoning.

#### Homeopathy

- Arsenicum album for foulfood smelling diarrhea from poisoning or traveler's diarrhea with burning sensation in the abdomen and around the anus; this remedy is most appropriate for individuals who feel exhausted yet restless and whose symptoms tend to worsen in the cold and improve with warmth; may also vomiting Arsenicum may also be used to prevent diarrhea when traveling
- Chamomilla for greenish, frothy stool that smells like rotten eggs; used primarily for children, especially those who are irritable, argumentative, and difficult to console
- Calcarea carbonica for children who fear being in the dark or alone and who perspire heavily while sleeping; stools have a sour odor

- Podophyllum —for explosive, gushing, painless diarrhea that becomes worse after eating or drinking; exhaustion often follows bowel movements and the individual for whom this remedy is appropriate may experience painful cramps in lower extremities
- Sulphur for irritable and weepy children; may have a red ring around the anus and diarrhea with the odor of rotten eggs

#### **Prognosis/Possible Complications**

Death is rare in other fish poisonings, but nerve-related symptoms can continue for months. The following are some possible aftereffects of food poisoning:

- After shigellosis, white blood cell problems and kidney problems
- After *E. coli* infection, kidney problems and bleeding problems
- After yersiniosis, arthritis or tender bumps under the skin
- After botulism, long hospital stays (1 to 10 months) with fatigue and difficulty breathing for 1 to 2 years or respiratory failure
- After C. perfringens infection, serious inflammation, bleeding, and tissue death in the intestines
- After salmonellosis, Reiter's syndrome (an arthritis-like disease) and inflammation of the heart lining
- After campylobacteriosis, Guillain-Barré syndrome (a nerve disease)

#### Follow up

For severe cases of food poisoning, the person may need to stay in the hospital to receive fluids and electrolytes, and so physicians can monitor breathing. Dialysis may be required. Cathartics, enemas, and lavage may help eliminate toxins.

## 59.Gallbladder Disease

Gallbladder disease is swelling of the gallbladder, a pear-shaped organ under the liver that secretes bile, a fluid that helps with digestion. Gallbladder disease often occurs with gallstones.

#### Signs and Symptoms

- Pain, mostly on the upper right side of the abdomen
- Pain following meals, intolerance of fatty foods
- Nausea, vomiting
- · Loss of appetite

#### What Causes It?

Inflammation of the gallbladder happens because a stone is blocking a passageway in the gallbladder. Gallstones develop in the gallbladder when substances in bile form hard particles. They can be as small as a grain of sand or as large as a golf ball.

#### What to be done

Feel tenderness when the upper right side of abdomen is touched. Jaundice occurs when the bile duct is also blocked. During an ultrasound, sound waves take pictures of gallbladder. This test is painless and can be performed quickly.

#### **Treatment Options**

Gallbladders that cause pain are usually removed. Most gallbladder surgery today is performed with a laparoscope, an instrument shows the surgeon pictures gallbladder as it is being removed and allows for a smaller incision and a shorter hospital stay than traditional surgery. Some drugs can dissolve stones, avoiding the need for surgery. It can take two years for a stone to dissolve.

- Oral bile acids can dissolve cholesterol stones that are quite small (less than 15mm in diameter). It works for 40 percent of people within two years. There are two types of oral bile acids: chenodeoxycholic acid and ursodeoxycholic acid. Chenodeoxycholic acid has more side effects.
  - Methyl tert-butyl ether-a strong solvent; 95 percent of the stone's mass dissolves in 12.5 hours

#### Complementary Alternative and **Therapies** Nutrition

- Decrease total fat intake, especially saturated fats (meat and dairy products).
- Eliminate food allergens. Eggs, in particular, may irritate the gallbladder.
- Eat more fiber. Consider fiber supplements such as flax meal (1 tsp. one to three times per day). Combine 1 heaping tsp. of flax meal in 8 oz. of apple juice for a drink high in fiber and pectin.

- Lecithin (1,000 to 5,000 mg per day) for cholesterol excretion
- Choline (1,000 mg per day) and lipase (10,000 NF units with meals) stimulate gallbladder function.
- Vitamin E (400 to 800 IU/day) and vitamin C (1,000 mg two to three per day) promote production.

#### Herbs

- Choleretic herbs stimulate . production and increase bile solubility. Especially useful are milk thistle (Silybum marianum), dandelion root (Taraxacum officinale), greater celandine (Chelidonium majus), globe artichoke (Cynara scolymus), and turmeric (Curcuma longa). Use these herbs singly or in combination as a tea or tincture (15 to 20 drops), two to three times per day before meals.
- peppermint Enteric-coated (Mentha piperita) may help dissolve stones (0.2 to 0.4 ml three times a day between meals).
- Black beans (Phaseolus vulgaris) it is an amylase inhibitor that inhibits digestion of starch and absorption of glucose. It can be effectively used in all obese patients to reduce and control excess fat and thus lowering the risk of heart, liver, gall bladder diseases, diabetes, arthritis, breathing disorder, problem with conception etc and other problems associated with obesity.

#### Homeopathy

- Colocynthis for colicky abdominal pains that are lessened by pressure or bending double
- Chelidonium for abdominal pain that moves to right shoulder area
- Lycopodium for abdominal pain that is worse with deep breaths

#### **Physical Medicine**

Castor oil pack. Apply oil directly to skin, cover with a clean soft cloth (such as flannel) and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes. For best results, use for three abdomen. to Apply consecutive days.

especially the gallbladder area, to help reduce swelling.

#### Acupuncture

Acupuncture may prove especially helpful in pain relief, reducing spasm, and easing bile flow and proper liver and gallbladder

#### Follow up

Early surgery usually ends symptoms and recurrence; stones may recur in the bile duct, however.

#### Special Considerations

Use choleretic herbs with caution. Milk thistle and dandelion root are safe in pregnancy.

## 60.Gastritis; Stomach Inflammation

Gastritis is an inflammation of the lining of the stomach. There are many possible causes of this disorder including an infection, an irritant, an autoimmune disorder, or a backup of bile into the stomach. The stomach lining may be "eaten away," leading to sores (peptic ulcers) in the stomach or first part of the small intestine. Left untreated, these ulcers may bleed. Gastritis can occur acute or chronic gastritis. In most cases, gastritis does not permanently damage the stomach lining and sometimes no specific cause of the inflammation is identified.

#### Signs and Symptoms

The most common symptoms of gastritis are stomach upset and pain. The following are other symptoms of gastritis.

- Indigestion (also called dyspepsia)
- 0 Heartburn
- Abdominal pain
- Hiccups 0
- Loss of appetite 0
- Nausea
- Vomiting, possibly of blood or material that looks like coffeegrounds
- Dark stools

#### Causes

Gastritis can be caused by infection, disorders, or irritation. autoimmune backflow of bile into the stomach. Gastritis can also be caused by a blood disorder called pernicious anemia. Infections can be any of the following types:

- (usually Helicobacter Bacterial pylori)
- Viral (including herpes simplex virus)
- Parasitic
- Fungal

Irritation can be caused by a number of things, such as the following:

- Long-term medication use (for example, anti-inflammatory drugs [called NSAIDS])
- Alcohol use
- Cigarette smoking
  Chronic vomiting
- Chronic vomiting .
- Coffee and acidic beverages .
- Excess gastric acid secretion (such as from stress)
- Eating or drinking caustic corrosive substances (such poisons)
- Trauma (for example, radiation treatments or having swallowed a foreign object)

Other causes for gastritis are very rare. These include:

- Systemic disease (for example, Crohn's disease)
- Sarcoidosis

#### Risk Factors

- Infection with H. pylori
- Crowded, unsanitary conditions -this may increase risk of contracting H. pylori
- Acquired immunodeficiency syndrome (AIDS)
- Any condition that requires relief from persistent pain using NSAIDS, such as chronic low back pain, fibromyalgia, or arthritis
- Alcoholism
- Cigarette smoking
  - Older age
  - Genetic abnormalities

#### Diagnosis

There are several tests include endoscopy of the stomach, where a thin tube that has a light and a camera on the end is inserted down throat to stomach. This allows the doctor to see into stomach and, if necessary, a biopsy from the lining. The laboratory tests may need. A stool test may be used to check for the presence of blood, or a biopsy may be taken of the tissues of esophagus or stomach to determine the cause of discomfort. A breath test may detect H. pylori, or samples from your esophagus or stomach may be taken to look for this organism.

#### **Preventive Care**

Making lifestyle changes, such as avoiding the long-term use of irritants will go a long way to preventing gastritis and its complications like an ulcer. Stress reduction through relaxation techniques including yoga, tai chi, and meditation can also be quite helpful.

## **Treatment Approach**

Some causes may resolve by themselves over time, or may be relieved by stopping the ingestion of irritating substances such as alcohol, tobacco, and aspirin. Dietary changes will no doubt be recommended, although the bland diet often prescribed in the past is no longer thought to be necessary. Medications are often necessary to relieve symptoms, eradicate an infection such as H. pylori, and prevent or treat complications from gastritis such as an ulcer.

#### Lifestyle

The cure for gastritis caused by ingesting irritating substances is to stop the long-term use of these substances, which may include:

- Alcohol
- Tobacco
- Acidic beverages such as coffee (both caffeinated and decaffeinated), carbonated beverages, and fruit juices with citric acid
- NSAIDS, such as aspirin and ibuprofen – switch to other pain relievers
- Eat a fiber-rich diet
- Avoid high fat foods (high fat foods increases inflammation in the stomach lining)

#### Medications

Helicobactor pylori infestation, a common bacterial cause of gastritis and ulcers, is typically treated with a combination of drugs, which includes antibiotics, a bismuth compound, and a proton pump inhibitor. These drugs are usually taken for at least 14 days. In addition to the medications used for Helicobacter pylori infection, other medications include those that reduce stomach acid secretion:

- Antacids such as calcium carbonate and magnesium hydroxide with aluminum salts
- H<sub>2</sub> blockers such as ranitidine, cimetidine, nizatidine, and famotidine
- Proton pump inhibitors such as omeprazole and lansoprazole

Drugs that reduce stomach acid secretion help protect against or treat ulcers. Other drugs used for ulcers include:

- Misoprostol protects against the major intestinal toxicity of NSAIDS, and can reduce the formation of ulcers
  - Sucralfate helps to heal ulcers in the stomach

#### **Nutrition and Dietary Supplements**

Eating a diet high in fiber may not only cut risk of developing ulcers in half, but fiberrich foods may also speed the healing of ulcers. Fruits and vegetables are particularly protective sources of fiber and seem to reduce the amount of inflammation in the lining of the stomach; fruit juice appears to have this benefit as well. Plus, if you didn't have enough reasons to avoid fat in diet already, animal studies suggest that high fat foods may lead to gastritis. Consumption of foods and beverages that irritate the lining of the stomach or increase the stomach acids should be avoided completely or reduced, and known allergens eliminated. These often include:

- Alcohol
- Acidic drinks such as coffee (with and without caffeine)
- Milk
- Carbonated beverages
- · Spices and peppers

Gamma-linolenic acid (GLA)
GLA from evening primrose oil (EPO) may have anti-ulcer properties. GLA is an essential fatty acid (EFA) in the omega-6 family that is found primarily in plant-based oils, including EPO and borage seed oil.

**Probiotics** 

Healthy or "friendly" organisms, called probiotics, inhabit the lining of the intestines and protect us from the entrance of "bad" infections that can cause disease. Lactobacillus acidophilus (L. acidophilus) is the most commonly used probiotic. In test tube studies, L. acidophilus and other probiotics were able to kill or slow down the growth of H. pylori; research is needed to understand whether that benefit would occur in people.

#### Vitamin B12

People with pernicious anemia and *H. pylori* infection are deficient in vitamin B12. Supplementation with this vitamin may be used to treat both. Good dietary sources of vitamin B12 include fish, dairy products, organ meats (particularly liver and kidney), eggs, beef, and pork.

#### Others

- Bromelain (*Ananas comosus*) -- the protein-digesting enzymes found in bromelain (derived from pineapple) help promote and maintain proper digestion and may relieve symptoms of stomach upset or heartburn, particularly when used with other enzymes such as amylase and lipase.
- Vitamin A found in many fruits and vegetables, is thought to increase the benefit of these foods (which are also rich in fiber as discussed earlier). The combination of vitamin A and antacids may be more effective than antacids alone in healing ulcers.
- Vitamin C -- high-dose vitamin C treatment for four weeks effectively treated H. pylori infection. In addition, H. pylori appears to impair absorption of vitamin C, which may play a role in the higher risk of stomach cancer for those with this organism in their gastrointestinal tract.

## Herbs

The herbalist would work with to individualize treatment.

Astragalus
 membranaceus) – used traditionally
 to treat stomach ulcers. May also
 prevent the damage from radiation

- or chemotherapy that can lead to gastritis.
- Barberry (Berberis vulgaris)- This
  herb contains active substances
  called berberine alkaloids. These
  substances have been shown to
  combat infection and bacteria. For
  this reason, barberry is used to ease
  inflammation and infection of the
  gastrointestinal tract. Barberry has
  also been used traditionally to
  improve appetite.
- Bilberry (Vaccinium myrtillus) Studies in rats have found that
  anthocyanidins (an antioxidant)
  from bilberry fruits help prevent
  stomach ulcers caused by a variety
  of factors including stress,
  medications, and alcohol. Whether
  this will translate into help for
  people requires research.
- Cat's Claw (*Uncaria tomentosa*) The bark and root of this herb have been used among indigenous people of the rainforest for centuries to treat a variety of health problems including ulcers and other gastrointestinal disorders. The benefits of this herb may be due to its ability to reduce inflammation.
- Chamomile, Roman (Chamaemelum nobile)

  Traditionally, Roman chamomile has been used to treat nausea, vomiting, heartburn, and excess intestinal gas.
- Cranberry (Vaccinium spp.) may have properties that help prevent H. pylori.
- Dandelion (Taraxacum officinale) -Native Americans have traditionally used dandelion to treat kidney disease, heartburn and stomach upset, amongst other conditions. practitioners medicinal Chinese traditionally used dandelion to treat disorders, Today, digestive dandelion roots are primarily used appetite stimulant an digestive aid. If you have gallbladder disease, you should not use dandelion.
- Devil's Claw (Harpagophytum procumbens) many professional

herbalists consider devil's claw to be useful for upset stomach and loss of appetite.

- Dong Quai (Angelica sinensis) animal studies suggest that dong quai may soothe ulcers, but studies in people are needed before a definitive conclusion can be drawn.
- Ginger (Zingiber officinale) In China, ginger has been used to aid digestion and treat stomach upset as well as nausea for more than 2,000 years. This herb is also thought to reduce inflammation.
- Green Tea (Camellia sinensis) -Population based studies conducted in Japan suggests that people who drink green tea regularly may be protecting themselves developing chronic gastritis.
- Licorice (Glycyrrhiza glabra) this herb is a demulcent (soothing, coating agent) that has long been valued for its use in food and medicinal remedies. including treatments for stomach ailments. Some licorice root extracts, known as deglycyrrhizinated licorice (DGL), still have the healing properties of licorice without the harmful effects (like high blood pressure). DGL may be better for stomach or duodenal ulcers and may even be as effective as some prescription drugs for stomach ulcers.
- Slippery elm (Ulmus fulva) Although there has been little scientific research on slippery elm, it has a long history of use based on clinical experience. Gastritis and peptic ulcer are among conditions that seem to respond to slippery elm.
- Turmeric (Curcuma longa) extracts of turmeric root reduced the release of acid from the stomach and protected against injuries such as gastritis or inflammation of the intestinal walls and ulcers. Further studies are needed to know to what extent these protective effects apply to people as well.

(Achillea millefolium) \_ Yarrow Used traditionally to reduce inflammation, increase appetite, and ease stomach upset.

#### Others

The combined preparation was as effective as the drug cisapride. The combination preparation included the following extracts:

- Angelica (Angelica archangelica)
- chamomile German (Matricaria recutita)
- Lemon balm (Melissa officinalis)
- Licorice .
- Milk thistle (Silybum marianum)
- Peppermint (Mentha x piperita) 0

#### Homeopathy

- Pulsatilla -- for heartburn. queasiness, a bad taste in the mouth brought on by eating rich foods and (especially ice symptoms may include vomiting partly digested food; this remedy is most appropriate for an individual whose tongue is coated with a white or yellow substance
- Ipecacuahna -- for persistent and severe nausea, with or without vomiting and diarrhea, caused by an excess of rich or fatty foods
- Carbo vegetabilis -- for bloating and indigestion, especially with flatulence and fatigue
- Nux vomica -- for heartburn, nausea, retching without vomiting, burps caused and sour overeating, alcohol use, or coffee drinking; this remedy is most appropriate for individuals who also feel irritable and sensitive to noise and light

## Acupuncture

Acupuncture may be helpful in reducing stress and improving overall digestive function.

#### Other Considerations

Do not ignore potentially life-threatening symptoms such as vomiting blood or blood in stool. Be aware that you may not see frank blood in stool; it may simply look very dark, even black. If you are on both antibiotics and vitamin B12, take them at different times of day because vitamin B12 interferes with antibiotic absorption.

Pregnancy

Borage seed oil, and possibly other sources of GLA, should not be used during pregnancy because they may be harmful to the fetus and induce early labor.

**Prognosis and Complications** 

Follow-up is very important, because the H. pylori bacteria is linked to stomach cancer.

Peptic ulcers may develop when digestive juices damage the lining of the stomach or the duodenum. These ulcers can generally be treated effectively with lifestyle changes and medication.

## 61.Gastro Esophageal Reflux Disease (GERD)

Gastro esophageal reflux disease (GERD) is a disorder in which contents of the stomach or small intestine repeatedly move back up into the esophagus. Reflux causes heartburn, and although most people have an attack of heartburn at some point in their lives, persistent reflux and severe heartburn may indicate GERD. Normally when a person swallows, the muscular walls of the esophagus move in waves to push the food down into the stomach. Right after the the lower enters the stomach. food esophageal sphincter closes off esophagus. If the muscle fails to close tightly enough, the stomach contents can back up into the esophagus causing heartburn. Substances in the digestive juices from the stomach can damage the inner of the esophagus, lining inflammation ulcers, and precancerous changes to cells.

Signs and Symptoms

Heartburn is the primary symptom of GERD. Heartburn often occurs after a meal and worsens at night, when lying flat. It is more likely to occur following a heavy meal, or bend, lift, or lie down just after eating. Other symptoms of GERD include:

- Regurgitation of food
- Belching
- Nausea and vomiting
- Chronic cough, wheezing
- Sore throat, hoarseness or change in voice, difficulty swallowing
- · Chest pain

GERD is common in infants and young children, but is generally mild.

- Ongoing coughing
- Wheezing, gasping
- Severe vomiting
- Frequent burping

#### Causes

GERD can often be traced to the malfunctioning of the lower esophageal sphincter (LES). The LES is a muscle responsible for opening and closing the lower end of the esophagus, which it accomplishes by relaxing and contracting at appropriate times. The LES may weaken or lose tone, allowing the contents of the stomach to escape back up the esophagus. Any of the following may compromise the LES:

- Pregnancy
- Obesity
- Hiatus hernia
- Recurrent or persistent vomiting
- Nasogastric tubes
- Smoking cigarettes
- Some medications provoke that calcium including symptoms (such channel blockers amlodipine, diltiazem, felodipine, nisoldipine, and nifedipine, verapamil), anticholinergic drugs (including benztropine, biperiden, hyoscyamine, dicyclomine, isopropamide, and scopolamine), non-steroidal antiiron pills, inflammatory drugs (NSAIDs including aspirin and ibuprofen), dopamine potassium, disease), sedatives. Parkinson's bisphosphonates (alendronate and risedronate for osteoporosis), and beta blockers (such as atenolol, metoprolol, nadolol. labetalol, pindolol, and propranolol)

## Risk Factors

- Heavy meals
- Lying down or bending after a meal
- Eating immediately prior to exercise
- · Prior esophageal surgery

- Esophageal stricture (narrowing of the esophagus)
- Cigarette smoking
- Alcohol intake
- Psychological stress

Children with the following conditions are at particular risk for GERD:

- Neurological impairment
- Food allergies
- Scoliosis
- Frequent vomiting
- Cystic fibrosis
- Digestive disorders

#### Diagnosis

Symptoms, what they eat and drink, medications they are taking, and lifestyle are usually enough to make a clear diagnosis. If the diagnosis is unclear, one or more tests may be performed:

- Upper endoscopy, called esophagealgastroduodenoscopy
   (EGD), which involves the insertion of a tube down your throat into the esophagus to look for signs of reflux, inflammation, ulcers, or other changes in the esophagus.
  - A barium swallow, which involves visualization of the esophagus through a series of x-rays following the swallowing of a substance called barium.
  - Manometry measures the pressure of the sphincter muscle; if low, this is consistent with GERD.

#### **Treatment Approach**

The primary goals of treatment are to reduce the reflux, stop the harmful effect of the stomach's materials by reducing its acid content, improve the clearance of food through to the stomach, and protect the walls of the esophagus. For mild cases, these goals can be accomplished by making lifestyle changes and by taking over-the-counter medication. An herbalist may suggest licorice or other herbs for their soothing properties. For moderate to severe cases, prescription medication may be used more regularly and the condition monitored more closely. If these measures fail, surgery may ultimately be required.

#### Lifestyle

The following are typical suggestions for people with GERD:

- Avoid behavior that does not allow food to easily move down into and through the stomach. This includes bending, lying down, or participating in jarring exercises soon after a meal.
- Don't eat heavy meals
- Avoid acidic foods and drinks.
   These include caffeinated beverages, decaffeinated coffee, and orange juice
- Avoid alcohol, chocolate, spearmint, and peppermint. These can relax the low esophageal sphincter.
- Avoid carbonated beverages
- Avoid eating fatty foods, including full-fat milk, which also may relax the lower esophageal sphincter tone.
   Take medication with plenty of water
- Lose weight if you are overweight
- Quit smoking
- Avoid medications that provoke symptoms.

If you experience more frequent symptoms at night:

- Raising the head of bed about six inches
- Avoiding bedtime snacks

Stress may worsen symptoms. Therefore, relaxation, such as yoga, tai chi, and meditation are worth considering, as part of whole, comprehensive treatment plan.

#### Medications

There are several different types of medications used for GERD, and each works in a different way. Antacids neutralize the stomach acids; histamine H2 blockers interfere with the production of acid; and proton pump inhibitors suppress molecules in the glands responsible for the release of acid. Avoid taking other medications within three hours of an antacid because antacids may limit the absorption of other drugs.

• Over-the-counter antacids typically recommended for mild symptoms of GERD; most brands are a combination of three active ingredients: magnesium salts (often combined with aluminum to prevent diarrhea); calcium carbonate (effective and fast-acting, but may

cause constipation); and aluminum salts (may also cause constipation and excessive use may cause calcium loss).

- Histamine H2 receptor blockers (such as cimetidine, famotidine, nizatidine, and ranitidine) -- relieve symptoms for 6 to 24 hours usually taken at bedtime.
- Proton pump inhibitors (including esomeprazole, lansoprazole, omeprazole, pantoprazole, and rabeprazole) are the most effective class of drugs for relieving symptoms of GERD; these drugs also speed the healing of the esophagus.
- Prokinetic agents specifically metoclopramide, which promotes movement of stomach acids along the gastrointestinal tract, rather than backing up into the esophagus.

### Surgery and Other Procedures

Diet, medication, and lifestyle changes are not enough to relieve symptoms of GERD. In such cases, a surgical procedure called fundoplication may be performed to prevent reflux and repair a hiatus hernia.

## Nutrition and Dietary Supplements Bromelain (Ananas comosus)

Bromelain help to promote and maintain proper digestion. These enzymes may also relieve symptoms of stomach upset or heartburn, particularly when used with other enzymes such as amylase and lipase.

## Gamma Linolenic Acid (GLA)

This omega-6 fatty acid comes from evening primrose, black currant, borage, and fungal oils. GLA from evening primrose oil (EPO) may have anti-ulcer properties.

#### Selenium

Selenium, which is found in large quantities in whole grain products, may have some protection against Barrett's esophagus becoming cancerous.

## Herbs

## Licorice (Glycyrrhiza glabra)

Licorice is a demulcent (soothing, coating agent) often used to prevent and treat stomach ulcers. Trials in people support this use for licorice. For example, preparations containing glycyrrhizin may be as effective as leading anti-ulcer medications in relieving pain associated with stomach

ulcers and preventing the ulcers from recurring.

#### Turmeric (Curcuma longa)

Extracts of turmeric root reduced the release of acid from the stomach and protected against injuries such as inflammation and ulcers, both of which are potential complications from GERD.

#### Other

- Astragalus
   membranaceus) Clinically,
   astragalus is used mainly for
   disorders of the digestive system,
   including ulcers.
- Devil's claw (Harpagophytum procumbens) - Since its introduction to Europe from Africa in the early 1900s, dried roots of Devil's claw have been used to relieve heartburn, amongst other conditions and symptoms.
- Slippery Elm (*Ulmus fulva*) While there has been little scientific research on slippery elm, it has a long history of use based on clinical experience, including for ulcers and gastrointestinal inflammation.

#### Homeopathy

- Pulsatilla -- for heartburn, queasiness, a bad taste in the mouth brought on by eating rich foods and fats (especially ice cream); symptoms may include vomiting partly digested food; this remedy is most appropriate for an individual whose tongue is coated with a white or yellow substance
- Ipecacuahna -- for persistent and severe nausea, with or without vomiting and diarrhea, caused by an excess of rich or fatty foods
- Carbo vegetabilis -- for bloating and indigestion, especially with flatulence and fatigue
- Nux vomica -- for heartburn, nausea, retching without vomiting, and sour burps caused by overeating, alcohol use, or coffee drinking; this remedy is most appropriate for individuals who also feel irritable and sensitive to noise and light

### **Other Considerations Pregnancy**

GERD is quite common during pregnancy, particularly in the third trimester.

## Warnings and Precautions

People with high blood pressure, obesity, or kidney, heart, diabetes. conditions should avoid licorice. This herb should also not be used by pregnant or breastfeeding women or by men with libido decreased or other sexual dysfunctions. Use of any licorice product is not recommended for longer than four to six weeks.

## **Prognosis and Complications**

The acidic contents of the stomach can damage the esophagus, causing narrowing, ulcers, erosion, and precancerous changes to cells known as Barrett's esophagus. GERD can also result in respiratory diseases, ear, nose, throat conditions, and tooth decay,

## 62.Glaucoma

Glaucoma is a slowly progressing disease that causes damage to the eye's optic nerve and can result in blindness. Openangle glaucoma is the most common form of the disease. Because there are usually no symptoms at first, half of the people with this disease don't know they have it. With early treatment, serious vision loss and blindness can usually be prevented.

#### Signs and Symptoms

While symptoms do not initially occur, as the disease progresses can lose peripheral vision and then forward vision. Some signs can only be found during an eye exam, such as increased pressure inside the eye and optic nerve abnormalities.

#### What Causes It?

A clear fluid flows in and out of the space at the front of the eye, nourishing nearby tissues. Glaucoma causes the fluid to pass through too slowly or to stop draining altogether. As the fluid builds up, the pressure inside the eye increases, causing damage to the optic nerve and vision loss.

#### Who's Most At Risk?

People with the following conditions or characteristics are at risk for glaucoma.

- Over 60 years of age
- Family history
- African-American descent
- Diabetes
- Myopia (near-sightedness)
- Taking certain drugs, such as antihistamines or blood pressure medications
- Food sensitivities
- Sedentary lifestyle
- Hypothyroidism

#### What to be done

To detect glaucoma, your eye care professional will perform the following tests.

- Visual acuity-use of an eye chart measures how well you see at various distances
- Visual field-measures peripheral vision
- Pupil dilation-drops are placed into the eye to dilate (widen) the pupil; this gives your eye care professional a better view of the optic nerve to check for signs of damage.
- Tonometry-determines the fluid pressure inside the eye; one type uses a purple light while another type uses a puff of air

## **Treatment Options**

#### Prevention

While glaucoma is not preventable, early detection and treatment are the best defenses against serious visual damage. At-risk patients should avoid medicines that increase eye pressure.

## **Treatment Plan**

The primary goal of treatment is to minimize loss of vision by reducing pressure in the eye.

#### **Drug Therapies**

Eye drops and pills are the most common early treatment for glaucoma. Some cause the eye to produce less fluid, while others lower pressure by helping fluid drain from the eye.

Surgical and Other Procedures While glaucoma surgery may remaining vision, it does not improve sight.

• Laser surgery-makes 50 to 100 evenly spaced burns that stretch the

- drainage holes in the eye, allowing fluid to drain more efficiently
- Conventional surgery-creates a new channel for fluid to drain from the eye

## Complementary and Alternative Therapies Nutrition

Nutritional tips include the following.

- Eat foods rich in bioflavonoids and carotenes, such as dark berries, dark leafy greens, and yellow and orange vegetables.
- Eliminate food allergens.
- Reduce foods that may dramatically alter levels of sugar in your blood, such as sweets, fruits, and refined foods.

Potentially beneficial nutrient supplements include the following.

- Vitamin C (500 to 1,000 mg three times per day)
- Vitamin E (400 to 800 IU per day) and vitamin A (10,000 IU per day) or beta carotene (25,000 IU per day), thiamine (10 mg per day)
- Coenzyme Q10 (100 mg one to two times per day), which may minimize side effects of certain drug therapies
- Zinc (30 mg per day) and selenium (200 mcg per day)
- Omega-3 fatty acids (300 to 500 mg daily)

## • Melatonin (2 to 5 mg before bed)

#### Herbs

- Bilberry (*Vaccinium myrtillus*) 100 to 200 mg two times per day
- Rutin 20 mg three times per day, for associated allergies
- Hawthorn berries (Crataegus monogyna) 200 mg two times per day, especially for high blood pressure
- Ginkgo (Ginkgo biloba) 120 mg two times per day to improve circulation
- Combine equal parts of ginkgo, hawthorn, bilberry, and elderberry (Sambucus nigra) in a tea (three cups per day) or tincture (60 drops two times per day) to strengthen vascular tissues and improve circulation.

#### Homeopathy

- Phosphorus for vertigo
- Physostigma for muscle spasms and neurological problems
- Spigelia for sharp pains

## **Prognosis/Possible Complications**

If glaucoma is not treated early, some vision loss can occur and other eye as well, since it is at risk for the same disease process.

## 63.Gout

Gout usually affects men over age 30 with a family history of gout, but it can occur at any time and also affects women, especially after menopause. Recent food and alcohol excess, surgery, infection, physical or emotional stress, or the use of certain drugs can lead to the development of gout symptoms.

Signs and Symptoms

- Extreme pain in a single joint, usually the base of the big toe, but other joints can also be affected (such as the feet, fingers, wrists, elbows, knees, or ankles)
- Joint is shiny red-purple, swollen, hot, and stiff

- Fever as high as 39°C (102.2° F) with or without chills
- Attack develops over a matter of hours and may get better over a few days or weeks
- In later attacks, may see lumps (called tophi) just under the skin in the outer ear, hands, feet, elbow, or knee

#### What Causes It?

The body either produces too much uric acid, doesn't excrete enough uric acid, or both, so that the acid accumulates in tissues in the form of needle-like crystals that cause pain. Gout generally occurs because of a predisposition to the condition, but it can

result from blood disorders or cancers, such as leukemia, or the use of certain drugs.

#### What to be done

Examine the affected joint, evaluate how painful it is, and may ask if there is any history of gout in the family. Take a sample of fluid from the affected joint, draw blood for a blood test, or take X rays to rule out other possibilities.

## **Treatment Options**

Give ibuprofen or another nonsteroidal antiinflammatory drug (NSAID) to help with the pain and swelling. Avoid drinking alcoholic beverages and avoid the foods that trigger attacks. Besides NSAIDs, may be given other drugs.

## Complementary and Alternative Therapies Nutrition

- Maintain a healthy weight. However, it is important to avoid crash dieting and rapid weight loss.
- Drink plenty of water because dehydration may make gout worse.
- Restrict purines in diet. Purines increase lactate production, which with uric acid competes excretion. Foods with high purine content include beef, goose, organ sweetbreads, mussels, anchovies, herring, mackerel, and yeast. Foods with a moderate amount of purines include meats, poultry, fish, and shellfish not listed above. Spinach, asparagus, beans, lentils, mushrooms, and dried peas also contain moderate amounts of purines.
- Do not drink alcohol, especially beer.
- Cherries—One half pound of cherries per day (fresh or frozen) for two weeks lowers uric acid and prevents attacks. Cherries and other dark red berries (hawthorn berries and blueberries) contain anthocyanidins that increase collagen integrity and decrease inflammation. Cherry juice (8 to 16 oz. per day) is also helpful.
- Vitamin C—8 g per day can lead to decreased blood uric acid levels.
   Note that there is a small subset of people with gout who will actually

- get worse with this level of vitamin C.
- Folic acid—10 to 75 mg per day inhibits xanthine oxidase, which is required for uric acid production,
- EPA (eicosapentaenoic acid) inhibits pro-inflammatory leukotrienes. Dose is 1,500 mg per day.
- Niacin—Avoid niacin in doses greater than 50 mg per day. Nicotinic acid may bring on an attack of gout.
- Vitamin A—There is some concern that elevated retinol levels may play a role in some attacks of gouty arthritis.

#### Herbs

- Devil's claw (Harpagophytum procumbens) reduces pain and inflammation. Dose is 1 to 2 g three times per day of dried powdered root, 4 to 5 ml three times per day of tincture, or 400 mg three times per day of dry solid extract during attacks.
- Bromelain (Ananas comosus)—
  proteolytic enzyme (antiinflammatory) when taken on an
  empty stomach. Dose is 125 to 250
  mg three times per day during
  attacks.

#### Homeopathy

- Aconite for sudden onset of burning pain, anxiety, restlessness, and attacks that come after a shock or injury
- Belladonna for intense pain that may be throbbing; pain is made worse by any motion and better by pressure; joint is very hot
- Bryonia for pain made much worse by any kind of motion; pain is better with pressure and with heat
- Colchicum for pains made worse by motion and changes of weather, especially if there is any nausea associated with the attacks
- Ledum when joints become mottled, purple and swollen; pain is much better with cold applications and is worse when overheated

## Physical Medicine

- Hot and cold compresses-three minutes hot alternated with 30 seconds cold provide pain relief and increase circulation.
- Bed rest for 24 hours after acute attack. However, prolonged bed rest may make the condition worse.

Special Considerations
People who have had gout have an increased risk of developing kidney stones, high blood pressure, kidney disease, diabetes mellitus, high triglycerides, and atherosclerosis.

## 64. Hair Disorders

Hair disorders is a broad category that includes the following types.

- Alopecia: the loss or thinning of hair (two types of alopecia are scarring, in which hair follicles are destroyed, and nonscarring, which can be reversible)
- Male-pattern baldness (androgenic alopecia): the most prominent type of hair disorder affecting, to varying degrees, half of all men over 50 years of age
- Hirsutism: male-pattern hair growth affecting eight percent of adult women
- Hair shaft disorders: hereditary abnormalities

### Signs and Symptoms

The following signs and symptoms, depending on the type, accompany hair disorders.

- Alopecia (nonscarring) involves hair loss all over or in circular areas, receding hairline, broken hairs, smooth scalp, inflammation, and possibly loss of lashes, eyebrows, or pubic hair.
- Alopecia (scarring) is limited to involves and particular areas the edge and inflammation at follicle loss toward the center of lesions, violet-colored abnormalities, and scaling.
- Hirsutism involves male-pattern hair growth in women, irregular menstruation, lack of ovulation, acne, deepening of voice, balding, and genital abnormalities.
- Hair shaft disorders involve split ends, and hair that is dry, brittle,

and coarse, as well as skin and other abnormalities.

#### What Causes It?

Hair disorders can be caused by any of the following.

- Alopecia (nonscarring)—skin disorders, certain drugs, certain diseases, autoimmunity, iron deficiency, severe stress, scalp radiation, pregnancy, or pulling at your own hair
- (scarring) -skin Alopecia disorders, diseases, or bacterial infections
  - Hirsutism- excess of androgen (steroid hormone that stimulates development of male sex organs secondary sexual characteristics). overproduction of androgen could result from certain drugs or conditions.
  - Hair disorders-over shaft processed hair (coloring, permanent waves, excessive heating) or certain diseases.

## Who's Most At Risk?

- Alopecia-male gender, genetic predisposition, pregnancy, physical or emotional stress, poor diet
- Hirsutism—genetic predisposition, lack of ovulation
- Hair shaft disorders—genetic predisposition, damaging grooming practices

## What to be done

A physical exam can help identify the type of hair disorder, and laboratory tests can reveal any underlying diseases. In the case of hirsutism, imaging may help diagnose the cause.

## **Treatment Options Treatment Plan**

The primary goals of treatment are to treat the underlying cause, re-grow the hair when possible, and correct damaging grooming practices.

## **Drug Therapies**

Alopecia:

- Minoxidil (Rogaine), for hair regrowth and possibly to prevent further loss
- Tretinion (Retin-A), to decrease thick scalp layer and increase minoxidil penetration
- Topical or injectable steroids

#### Hirsutism:

- Steroids
- Oral contraceptives

#### Hair shaft disorders:

- Minoxidil
- Drugs for underlying diseases

## **Surgical and Other Procedures**

- Cosmetic therapies, such as surgical placement of follicle-supporting plugs or folds
- For hirsutism, possibly removal of ovarian tumor

#### Complementary and Alternative **Therapies** Nutrition

- Eat foods high in B vitamins and minerals, such as whole grains, dark leafy greens, and sea vegetables; eat adequate protein.
  - · Avoid sugar, caffeine, and refined foods.

Potentially beneficial nutrient supplements include the following.

- B-complex vitamins, especially B<sub>5</sub> (100 mg four times per day), biotin (300 mcg per day), PABA (30 to 100 mg three times per day), and inositol (250 to 1,000 mg per day)
- Minerals, especially calcium (1,000 mg per day), magnesium (400 mg per day), selenium (100 to 200 mcg per day), manganese (10 mg per day), and zinc (20 to 30 mg per day)

- Vitamin C (500 to 1,000 mg three times per day), vitamin E (400 IU per day), and vitamin A (10,000 IU per day) or beta carotene (25,000 IU per day)
- Omega-3 fatty acids (EPA, DHA, flaxseed oil, fish oil) or omega-6 fatty acids (borage or evening primrose oil), 1 tbs. or equivalent two to three times per day

#### Herbs

For alopecia and hair shaft disorders:

- Ginkgo leaf (Ginkgo biloba), rosemary (Rosemarinus officinalis), prickly ash bark (Xanthoxylum clava-herculis), horsetail (Equisetum arvense), yarrow (Achillea millefolium), and elderberry (Sambucus nigra)
- For bacterial infections. coneflower (Echinacea purpurea) with goldenseal (Hydrastis canadensis); for fungal infections, add oregano (Origanum vulgare)
  - For stress, substitute oatstraw (Avena sativa) for elderberry

#### For hirsutism:

Saw palmetto (Serenoa repens) 200 mg two to three times per day

Topical applications of essential oils may be beneficial in skin infections and for stimulating new hair growth. Use three to four drops each of chamomile (Matricaria recutita), rosemary, and sage (Salvia officinalis) in 1 tbs. vegetable oil (for example, flax, borage, or olive). Massage gently into affected area one to two times daily.

#### Homeopathy

Some of the most common remedies include Ignatia, Pulsatilla, and Sepia. Acute dose is three to five pellets of 12X to 30 C every one to four hours until symptoms are relieved.

**Acupuncture and Massage** 

These approaches may help address the underlying cause of a hair disorder.

## 65.Heat Exhaustion

The body's core temperature is controlled by the hypothalamus, the region of the brain that also controls thirst, hunger,

sexual function. Under normal conditions, the body dissipates excess heat, primarily through the skin and to a lesser extent through the lungs. With heat exhaustion, body systems that regulate temperature become overwhelmed and the body produces more heat than it can dissipate.

## Signs and Symptoms

Heat exhaustion is accompanied by the following signs and symptoms:

- Fatigue and malaise
- Headache
- Fever (not exceeding 104°F)
- Dehydration
- Rapid heartbeat
- Dizziness, fainting
- Nausea, vomiting
- Muscle cramps
- Heavy sweating or no sweating at all

When body temperature exceeds 104°F, or if coma or seizure occurs, this indicates that heat exhaustion has progressed to a condition called heat stroke.

#### What Causes It?

Heat exhaustion results most frequently from exposure to high temperature, dehydration, usually from not drinking enough fluids. It also can happen when large volumes of sweat are replaced with fluids that contain too little salt.

#### Who's Most At Risk?

- Dehydration
- Age (the elderly and children under 5 years of age)
- · Illness or chronic disability
- Obesity
- Pregnancy
- Cardiovascular disease
- Respiratory disease
- Alcohol consumption
- Physical exertion in hot environments (athletes, military personnel, outdoor laborers are particularly at risk)
- Being unaccustomed to a warm or humid environment
- Medications that interfere with the body's heat-regulation system, including antipsychotics, tranquilizers, antihistamines, tricyclic antidepressants, and some over-the-counter sleeping pills

#### What to be done

Physical examination; check blood pressure, pulse, and temperature; and assess your level of dehydration. Lab tests of blood and urine samples may be needed.

## **Treatment Options**

#### Prevention

Thirst is not a reliable indicator of impending dehydration; individuals working and exercising in the heat, therefore, should drink plenty of fluids before, during, and after the activity as well as adhere to the following precautions to prevent heat exhaustion:

- Stay in cool or air-conditioned environments when possible on hot days.
- Increase fluid intake; drinking adequate fluids during exercise, for example, prevents heat exhaustion and its complications including muscle damage and kidney failure; dehydration can stress the heart and impair the kidneys' ability to maintain the correct level of fluids and balance of electrolyte; drinking fluids during exercise helps to improve heart function, maintain kidney function, and lower the body's core temperature.
- Check on those vulnerable to heat exhaustion (the elderly, for example).
- Avoid alcohol, caffeine and sugar which may all be dehydrating; drink sports drinks that are sweetened with natural juices.
- Exercise or work outdoors during cooler times of day.
- · Take cool baths.
- Wear loose, lightweight clothing.
- Athletes should consume 500 ml of fluids before an event and 200 to 300 ml at regular intervals.
- Long term prevention of heat exhaustion includes regular, physician approved exercise; novice athletes who are not well conditioned and suddenly participate in prolonged, strenuous activities on a hot day may be at increased risk for heat exhaustion and sudden kidney failure; those who participate in regular exercise

over time, allowing their bodies to adjust to hot conditions, may better tolerate exercise on hot days.

#### **Treatment Plan**

The primary strategies for treating heat exhaustion are to rest in a cool environment and to take in fluids. Water is adequate under most circumstances. Physicians may recommend saline electrolyte solutions, administered orally for mild dehydration and intravenously in more severe cases.

## **Drug Therapies**

Oral or intravenous saline electrolyte solution may be used.

## Complementary and Alternative Therapies

#### Nutrition

Most conventional physicians recommend electrolytes in fluid replacement products for people at risk of heat exhaustion. Others also suggest that endurance athletes take mineral supplements including:

- Calcium
- Magnesium
- Potassium

Foods high in these nutrients include dark leafy greens, nuts, seeds, whole grains, sea vegetables, blackstrap molasses, bananas.

#### Herbs

- Chinese skullcap (Scutellaria baicalensis) - used in traditional Chinese medicine to temperature by dilating vessels near the surface of the skin which helps dissipate heat
- Elder flower (Sambucus nigra) used to treat fever in Germany and Great Britain; used in combination with peppermint leaf (Mentha x piperita) in the United States and Canada to treat fever
- Subprostrata (Euchresta formosana) - used in traditional Chinese medicine to reduce temperature by dilating blood vessels
- Willow bark (Salix spp.) -- used to treat fever in Europe

Yarrow (Achillea millefolium) used to treat fever in Great Britain and other parts of Europe as well as traditional cultures in America; also used as an Ayurvedic medicine

#### Also of note:

Cayenne pepper (Capsicum spp.) contains the ingredient known as capsaicin that may lower body temperature by stimulating sweat glands; many cultures, particularly those in hot climates, incorporate red pepper into their cuisine.

### Homeopathy

Some common remedies for overheating include:

- Belladonna (Deadly nightshade) often used for fever, particularly if flushed with bright red skin and dulled mentation; the person for whom this treatment is appropriate does not usually feel thirsty even though his or her mouth and skin are dry
- Glonoinum (Nitroglycerin) used for fever if the person is flushed and sweaty; the person for whom this is appropriate may complain of a hot face but cold extremities, as well as headache, irritability, confusion.

## **Prognosis/Possible Complications**

Prognosis is good (24- to 48-hour recovery) avoided. if heat stroke is rehydration, clinicians will often check fluid avoid and electrolyte levels complications. Depending on the severity of exhaustion, this heat hospitalization.

## Follow up

Want to check the fluid levels in body to see electrolyte replacement should be continued.

## 66.Hemophilia

Hemophilia is the most common inherited bleeding disorder. It involves a deficiency of one of two blood-clotting

substances, known as factor VIII and factor IX, and leads to the inability of the blood to clot. There are two types of hemophiliac

type A and type B—but the symptoms are the same in both types.

## Signs and Symptoms

- Joint pain and swelling, frequently in the knees and elbows
- Heavy bleeding, or bleeding that lasts a long time, from an accident or other injury; the start of bleeding may be delayed
- Large bruises
- Swelling under the skin and between muscles, with fever, skin discoloration, and pain
- Internal bleeding in the abdominal region, airway, or central nervous system
- Bleeding of the mouth and gums; tooth loss
- Blood in the urine
- Digestive problems
- Nosebleeding

#### What Causes It?

Hemophilia is an inherited disorder that almost exclusively affects men. Women are rarely affected but are the carriers who can pass the condition to their male children.

#### Who's Most At Risk?

Hemophilia affects people from all ethnic groups. The daughters of men with hemophilia are carriers. However, even if hemophilia runs in the family, only about half the sons of carriers will have hemophilia?

#### What to be done

Take a family history and do a physical examination, checking for deep bleeding, muscle spasms, limited joint motion, joints that are warm and enlarged, and bruises. Blood tests including tests of the blood's clotting abilities, computed tomography (CT) scans, and magnetic resonance imaging (MRI) for bleeding in the joints may be used.

## **Treatment Options**

## Prevention

Hemophilia cannot be prevented, but it is possible to test to determine whether an unborn baby will have the disorder. If a person has hemophilia, the following cautionary measures should be taken:

 Avoid taking aspirin and nonsteroidal anti-inflammatory drugs (NSAIDs).

- Vaccinate all patients, including infants, with the hepatitis B vaccine.
- Self-administer factor VIII or IX to help delay arthritis and prevent joint disease.
- Avoid circumcising male infants of women known to be carriers of hemophilia until the disorder in the infant has been ruled out.
- Carry information at all times identifying the person as someone with hemophilia.

#### Treatment Plan

The primary treatment for hemophilia is factor replacement therapy, which involves replacing the blood's deficient clotting factor. This factor is produced from normal human or animal blood products or is genetically engineered. A physician may also prescribe pain relievers. Physical therapy may improve joint healing and function. Surgery may be performed for complications arising from hemophilia.

#### **Drug Therapies**

- Factor VIII or IX replacement therapy
- Pain relievers other than aspirin or NSAIDs, as they decrease the ability of the blood to clot
- Topical medications to control bleeding
- The drug desmopressin (DDAVP) may be used in people with mild hemophilia as an alternative to clotting factors.

## Surgical and Other Procedures

- Synovectomy: removal or shrinking of the sac around a joint
- Osteotomy: surgical cutting of a bone
- Arthroplasty: surgical remodeling of a diseased joint
- Removal of an uncontrollable, expanding hematoma
- Amputation of infected or useless extremities

# Complementary and Alternative Therapies

The degree of spontaneous bleeding has been linked to emotional and psychological stress. Some mind/body therapies may help relieve stress and anxiety. Hypnosis may reduce the need for blood transfusions.

## Self Hypnosis

Several studies suggest that those who have learned self-hypnosis need far fewer blood products over an extended period of time (namely two to three years) than those who have not learned the technique; included relaxation training along with hypnosis. Hypnosis may help blood clot better and may reduce the need for blood transfusions.

#### Nutrition

It would be wise to avoid vitamin E and fish oil if you have hemophilia, as they seem to increase bleeding time by keeping platelets from clumping. Vitamin K plays a role in normal clotting and useful either from dietary sources or in supplement form.

#### Herbs

Herbalists may recommend herbs that strengthen blood vessels and act as astringents (causing contraction) to make bleeding less severe, such as the following:

- Bilberry fruit (Vaccinium myrtillus)
- Grape seed extract (Vitis vinifera)
- Hawthorn berry (Crategus monogyna)
- Horse chestnut (Aesculus hippocastanum)
- Witch hazel (Hamamelis virginiana)
- Yarrow (Achillea millefolium)

In addition, people with hemophilia should avoid ginkgo (*Ginkgo biloba*), as it reduces platelet clumping.

#### Homeopathy

A review of several case reports found that the following remedies were helpful for individuals with hemophilia and even reduced their need for blood-clotting substances like factor VIII.

- Arnica for internal or external bleeding immediately following an injury; helpful for shock or trauma
- Carbo vegetabilis for people with pale skin and weakness who are extremely frail, even listless, but like cold and fresh air
- Crotalus horridus used when there is bleeding into the muscles and when blood appears thin and dark; this remedy is most appropriate for individuals who are tall, thin, and pale, have diarrhea and an aversion to warm food and

- drink; may have fears of being alone and death
- Hamamelis for bleeding from a cut or wound, especially useful in nosebleeds, hemorrhoids, and broken blood vessels in the eye
- Lachesis for heavy bleeding that is dark in color, especially in redheaded individuals that are jealous and depressed
- Millefolium for internal or external wounds with significant bleeding and poor clotting
- Phosphorus for frequent, heavy bleeding; this remedy is most appropriate for individuals who experience cold sweats and have a desire for alcoholic beverages; the individual may also feel as though clothing aggravates the throat
- Secale for bleeding that is worsened by heat and lessened by cold

#### Acupuncture

Acupuncture may help relieve joint problems caused by hemophilia. It may also relieve pain when other treatments have failed and may be a useful substitute for medicines that can cause bleeding.

#### **Physical Medicine**

Physical therapy may play an important role in reducing joint problems caused by repeated bleeding in those areas. The following modalities may be recommended by the physical therapist:

- Stretching
- Movement exercises
- Resistance training (such as weight lifting and other exercises that put tension on muscles)

A complete program may also include, when needed:

- Splints
- Ice
- Heat
- Ultrasound

prevent severe bleeding.

- Nerve stimulation
- Hydrotherapy (water therapy)
   Work with your physician to develop a program that is best for you. The routine should be used for at least 6 to 9 months to treat chronic joint inflammation and to

## **Prognosis/Possible Complications**

The life expectancy for people with hemophilia who do not have AIDS is 68 years. In people who do not receive factor replacement therapy, complications include the destruction of bones and joints, lifethreatening cysts, bleeding in the brain, airway obstruction, gangrene, bleeding into muscles causing damage to nerves, chronic bruising, and anemia. Sudden bleeding can occur with emotional stress.

#### 67. Hemorrhoids

Hemorrhoids are a condition in which veins in the rectal or anal area become swollen and painful and may bleed. Hemorrhoids may occur inside the entrance to the anus (interior hemorrhoids) or outside the entrance to the anus (exterior hemorrhoids). A blot clot (thrombosis) may form in the vein, making the hemorrhoid more painful and sometimes requiring surgical treatment.

### Signs and Symptoms

- Anal itching
- Anal ache or pain, especially while sitting
- Bright red blood on toilet tissue, stool, or in the toilet bowl
- Pain during bowel movements
- One or more hard tender lumps near the anus

#### Causes

Hemorrhoids are a type of varicose vein that simply occur with age. Being constipated or passing large, hard stools may contribute to the formation of hemorrhoids. In many cases, however, there is no obvious cause. In addition to age and constipation, other contributing factors include the following:

- Certain medical conditions (like cirrhosis – end stage liver disease)
- Pregnancy
- Sitting for prolonged periods of time
- Diet low in fiber or fluids

## Diagnosis

In significant bleeding or other symptoms, may perform a procedure called sigmoidoscopy, or colonoscopy. The intention of these endoscopic exams is, in part, to look for another cause of bleeding or pain.

## Preventive Care

Avoid straining during bowel movements. Prevent hemorrhoids by preventing constipation. Drink plenty of fluids (at least eight glasses per day). Eat a high-fiber diet

(fruits, vegetables, whole grains) and fiber supplements.

## Treatment Approach

Medications can ease pain and discomfort during the time it takes for the hemorrhoids to heal. In addition to medications, certain lifestyle measures can help to feel better and even prevent the recurrence of hemorrhoids.

#### Lifestyle

Try the following approaches to reduce the pain and itching from hemorrhoids:

- Apply witch hazel with a cotton swab
- Avoid pressure on the area (for example, sit on an inflatable ring).
- Wear cotton undergarments
- Avoid toilet tissue with perfumes or colors
- Try not to scratch the area
- Sit in warm bath (or use a Sitz bath) for 10 to 15 minutes 1 to 2 times per day.
- Avoid straining during bowel movements.
- Limit the amount of time you sit on the toilet.

#### Medications

- Corticosteroid creams can help reduce the pain and swelling. Hemorrhoid creams with lidocaine can reduce pain.
- Stool softeners help reduce straining and prevent hard stools.
- Bulk laxatives help prevent hard stools and constipation.

## Surgery and Other Procedures

For cases that don't respond to home treatments, a doctor may recommend surgery, like rubber band ligation or surgical hemorrhoidectomy. These procedures are generally used for patients with severe pain or bleeding who have not responded to other therapy.

## **Nutrition and Dietary Supplements** Fiber

Soluble fiber, such as psyllium, may be recommended by a physician to help soften stool and reduce the pain associated with hemorrhoids.

#### Flavonoids

This group of antioxidants, found primarily in dark berries, can help maintain or regain vascular integrity. Loss of vascular integrity due to age or other causes can contribute to the development of hemorrhoids.

#### Herbs

- Goldenrod (Solidago virgaurea) used topically in traditional herbal medicine to reduce inflammation of hemorrhoids.
- Gotu kola (Centella asiatica) used for venous insufficiency, pooling of blood in different locations such as the legs.
- Grape seed (Vitis vinifera) used by European folk healers to stop bleeding, inflammation, and pain, such as the kind brought on by hemorrhoids.
  - Roman Chamomile (Chamaemelum nobile) - This herb may reduce inflammation associated with hemorrhoids.
  - John's Wort (Hypericum perforatum) - applied topically, may prove to be beneficial for reducing pain and inflammation from hemorrhoids.
- Yarrow (Achillea millefolium) -popular in European folk medicine.

- this herb has traditionally been used to treat wounds and bleeding hemorrhoids.
- Proanthocyanidin 100mg times per day is beneficial in three varicose veins, haemorrhoids, insufficiency, venous and posthaemorrhoidectomy and postdefacation pain syndrome.

#### Homeopathy

- · Aesculus for burning hemorrhoids with a sensation of a lump in anus that feels worse when walking
- Aloe for a sensation of pulsation in the rectum with large, external hemorrhoids
- Collinsonia for chronic, itchy hemorrhoids with constipation
  - Hamamelis for large bleeding hemorrhoids with a raw feeling

#### Other Considerations Prognosis and Complications

Most treatments for hemorrhoids are very effective. To prevent the hemorrhoids from coming back, will need to maintain a highfiber diet and drink plenty of fluids. The blood in the enlarged veins may form clots, and the tissue surrounding the hemorrhoids can die. Hemorrhoids with clots generally require surgical removal. Severe bleeding may also occur. Iron deficiency anemia can result from prolonged loss of blood. Significant bleeding from hemorrhoids is unusual, however.

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68.Hepatitis; Viral
"Liver is lever of our body." -Anonymous.

Hepatitis is a serious disorder in which liver cells become inflamed. The inflammation is most occurs because of a virus. It can also be caused by an overactive immune system, and from alcoholism, chemicals, and environmental toxins. Viral hepatitis usually appears as type A, B, or C.

Type A, the most common form of viral hepatitis, often affects school-aged children. The disease is transmitted by contaminated

food or water, or contact with a person ill with hepatitis A. The hepatitis A virus is shed in the stools of an infected person during the incubation period of 15 to 45 days before symptoms occur and during the first week that the person feels sick. Blood and other body fluids may also carry the infection. The virus does not stay in the body after the infection has resolved, and, unlike hepatitis types B and C, there is no "carrier" state.

Hepatitis types B and C affect people of all ages. Most people who become infected with hepatitis B get rid of the virus within 6 months. This type of short infection is known as an "acute" case of hepatitis B. Approximately 10% of people infected with the hepatitis B virus develop a chronic, lifelong infection. People with chronic infection may or may not have symptoms. Those who do not develop symptoms are referred to as Having chronic hepatitis increases chance of permanent liver including cirrhosis and liver damage, cancer.

## Signs and Symptoms Acute Hepatitis

- Flu-like symptoms including fever, as well as aching or painful muscles and joints.
- Jaundice (yellow discoloration of both skin and the whites of eyes)
- Abdominal discomfort
- Fatigue
- Loss of weight
- Loss of appetite
- Nausea, vomiting
- Dark urine, colorless stool
- Diarrhea
- Whole body itching (called pruritus)
- Mild anemia
- Enlarged, tender liver

#### Chronic hepatitis

It may not be preceded by an acute phase or the acute symptoms may be quite subtle and go unnoticed. In fact, some people with hepatitis C only feel mild ongoing fatigue and, perhaps, whole body itching. The virus is then found by a blood test.

## Causes

Hepatitis A is usually transmitted from feces on unwashed hands and by ingesting contaminated food and water (for example, seafood from sewage contaminated water). It can also be transmitted through close contact with someone who has the virus. Hepatitis B and C are transmitted via blood; therefore, blood transfusion, intravenous (IV) drug use with contaminated needles, and sexual activity are all ways that people have contracted either of these viruses. In as many as 40% of the cases of hepatitis C, the specific cause of transmission is unknown. Blood and blood products that are used for

transmission can now be tested for both hepatitis B and C.

#### Risk Factors Hepatitis A

- Chronic institutionalization (nursing home or rehabilitation center)
- Day care employees or children
- Recent hepatitis A infection in a family member
- Recent travel or immigration from Asia, South or Central America
- Food industry workers
- Sewage workers

#### Hepatitis B

- Contact with blood in work setting: this puts physicians, nurses, dentists, and other healthcare personnel at particular risk
- Sex with multiple partners without the use of a barrier such as a condom
- History of blood transfusion prior to the early 1990's
- Receiving a tattoo with contaminated instruments
- IV drug use with sharing of contaminated needles
- Birth to a hepatitis B infected mother
- Travel to underdeveloped nations and immigrants from areas where disease rates are high (namely, the Asia Pacific and Mediterranean regions and southern Africa)
- Having the human immunodeficiency virus (HIV) puts you at greater risk for chronic hepatitis and its potential complications

## Hepatitis C

- Blood transfusion prior to July 1992
- Solid organ transplantation from a donor who has hepatitis C
- IV drug use and sharing of contaminated needles
- · Long-term kidney dialysis
- Contact with blood in work setting: this puts physicians, nurses, dentists, and other healthcare personnel at particular risk
- Sex with a person who has hepatitis C

- Birth to a hepatitis C infected mother, particularly if she has HIV
- Having HIV or hepatitis B puts you at greater risk for chronic hepatitis C and its potential complications

#### Diagnosis

First, ask a host of questions to assess risk for the different types of viral hepatitis. Questions will include whether you:

- Work in health care setting, including either a medical laboratory or a dialysis unit
- Have a parent, sibling, or child infected with hepatitis
- Engage in unprotected sex or have a sexual partner with either hepatitis B or C
- Use drugs by injection
- Live in or are exposed to unsanitary conditions
- Consume possibly contaminated food or water
- · Eat or handle raw shellfish

Next, examine abdomen carefully including palpating liver and spleen to see if either is enlarged or tender. Then, a blood test will be performed to assess liver function and test for antibodies against the specific hepatitis viruses. Request a urine test as well. For chronic hepatitis, a liver biopsy may be required, which must be done under general anesthesia. A liver biopsy is particularly important if you have chronic hepatitis C because this test assesses the degree of liver damage, which can occur even if you have no symptoms.

## **Preventive Care**

## Hepatitis A

Transmission of the virus can be reduced by faithfully following these practices, particularly in child daycare facilities and other institutions involving close contact with people:

- Avoid unclean food and water
- Wash hands thoroughly after using the toilet or changing a diaper, as well as before serving food
- Clean yourself thoroughly if you come into contact with any type of body fluid from an infected person (such as blood and feces)
- Those with the virus should not prepare food for others

#### Hepatitis B and C

Preventive measures are the same for both hepatitis B and C.

- Avoid contact with blood or blood products whenever possible
- Do not inject drugs of abuse, and especially do not share needles with anyone
- Avoid having multiple sexual partners
- Practice safer sex behaviors, including use of appropriate barrier methods such as condoms
- Go to a reputable shop for tattoos and body piercing
- Healthcare workers should practice universal precautions when handling blood and bodily fluids; this includes wearing gloves when performing any procedure with blood exposure, disposing of needles properly, and many other precautions, depending on your specific role.

### Immunization Hepatitis A

Candidates for the hepatitis A vaccine include:

- Anyone who lives or works in a community where outbreaks occur
- Those who travel frequently or have long overseas stays in high-risk areas
- Sexually active homosexual men
- People who already have a chronic form of hepatitis; should be vaccinated against hepatitis A before the chronic form reaches late stages of liver disease
- · Healthcare workers
- Those living in high-risk U.S. states, which include Alaska, Arizona, Arkansas, California, Colorado, Idaho, Missouri, Montana, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming
- Those with intimate exposure to someone with hepatitis A; in this case, your doctor will decide if the vaccine or immunoglobulin is most appropriate. This depends, in part, on the timing of the exposure.

Hepatitis B

There are several inactivated vaccines available for hepatitis B. Immunization provides the only definitive protection against hepatitis B. The hepatitis B vaccine is one of the recommended childhood immunizations, and is now part of routine pediatric care. Adults who are at higher risk, should also be vaccinated:

- Those who live with someone with hepatitis B
- Healthcare workers
- Travellers to high-risk areas
- Sexually active people who have multiple partners
- People on hemodialysis
- People who have suppressed immune systems (such as HIV)
- High-risk pregnant women

Hepatitis C

There is no vaccine for hepatitis C, but immunoglobulin helps protect against it after blood transfusions. Periodic doses in sexual partners of an infected person may also help to give protection.

# Treatment Approach Acute Hepatitis

The goals for treating acute viral hepatitis include:

- Assuring adequate nutrition and hydration
- Preventing further damage to the liver
- Avoiding transmission of the virus to others.

There are no medications to treat acute hepatitis, although your doctor recommend drugs that alleviate some of the symptoms. Most cases of acute hepatitis are mild even not and do hospitalization. Only people who are at high risk for complications, such as pregnant women, the elderly, people with serious underlying medical conditions, or those who become significantly dehydrated excessive nausea and vomiting need to be hospitalized. The very rare cases of acute hepatitis that lead to liver failure (called fluminant acute hepatitis) not only require but also need liver hospitalization, transplantation.

Chronic Hepatitis

The goals for treatment of chronic viral hepatitis include:

- Preserving liver function and preventing liver damage
- Boosting the immune system to help fend off damage from the virus

There are several medications from which doctor will choose to help achieve these Because the conventional medications used to treat chronic hepatitis have a lot of unpleasant side effects, many people with this condition turn to alternative medical therapies instead. Despite the popularity of herbs, particularly milk thistle (Silybum marianum), to treat this liver condition, none are proven absolutely effective and safe. Other practices that may help boost your immune function and help make you feel stronger and less tired while taking conventional medications include homeopathy, acupuncture, and massage therapy. Make sure that the therapist knows that you have hepatitis so that the necessary precautions can be taken to avoid spread of the virus.

## Lifestyle

For hepatitis A, these measures include:

- Washing clothes thoroughly with hot water
- Washing hands after using the toilet
- Heating contaminated articles for one minute, which should kill the virus
- Using household bleach for disinfecting hard surfaces
- Separating the eating and cooking utensils used by the household member with the virus from those used by other people living there
- Abstaining from sexual activity while acutely infected

For hepatitis B and C, these measures include:

- Avoiding sharing personal items such as toothbrushes and razors (microscopic blood particles may be on these items)
- Abstaining from sexual activity, or taking strict precautions such as always using a condom. Women should abstain during menstruation in particular.
- Handling objects contaminated with blood with special care, like wearing gloves when drawing blood if you work in a hospital

- Not sharing drug needles if you use street drugs intravenously and making sure that tatoo artists, body piercers, and acupuncturists use sterile needles.
- If you are traveling to a high-risk country, take the following precautions:
- Get vaccinated against hepatitis A and possibly hepatitis B
- Use bottled water for drinking and brushing teeth
- Eat heated food promptly. Heated food should be hot to the touch.
- Avoid buying food from street vendors
- Avoid sliced fruit. It may have been washed in contaminated water.
  - Avoid raw or undercooked fish and shellfish

Other general lifestyle measures to take include:

- Don't drink alcohol during the acute phase of hepatitis or if you become a carrier of types B or C.
- Quit smoking because new evidence suggests that cigarette smoking is associated with more severe infection.

#### Medications

Interferons – this group of medications are natural proteins that activate immune functions in the body and have anti-viral properties. These drugs do not work for everyone who takes him or her, but for those who do respond, the possible benefits include:

- Diminished viral levels of hepatitis B and C
- Reduced symptoms
- Improved survival rates

Drawbacks for this class of drugs include:

- Need to administer via injection
- Hepatitis B and C can become resistant to the medication; in other words, the drugs become ineffective over time
- Side effects from the interferons are often very unpleasant, even intolerable to some people as they may be worse than the symptoms from chronic hepatitis itself (particularly since some people with hepatitis C have no symptoms).

Common side effects are flu-like symptoms including fever, chills, and muscle aches. Additional side effects include depression, hair loss, weight loss, and drop in white blood cells (the cells in the body that help fight infection).

Corticosteroids – may be used in the early stages of chronic hepatitis to enhance the effects of interferon.

Nucleoside Analogues— this class of drugs, including lamivudine and ribavirin, are used to stop replication of the virus. Advantages of lamivudine, often used to treat chronic hepatitis B, over interferon include:

- Can be taken orally
- Fewer side effects
- Less expensive

Like interferon, nucleoside analogues can lose their effectiveness over time. Ribavarin is often used in combination with interferon for chronic hepatitis C. Although ribavarin improves the response rate for those with hepatitis C, side effects from the interferon become more likely when this second drug is added. Potential side effects from the ribavarin itself include:

- Anemia
- Skin disorders
- Coughing and shortness of breath
- Sleep disturbance
- Depression or anxiety
- Heartburn
- Weight loss

Metadoxine—In alcoholic hepatitis, it accelerates the normalization of liver function tests and ultrasonograpic changes, even in those who do not completely abstain from alcohol.

Surgery and Other Procedures

People with the following conditions may qualify for a liver transplant:

- Life-threatening cirrhosis and life expectancy is, otherwise, more than 12 years
- Liver cancer that remains confined to the liver
- Fulminant acute hepatitis
  Five-year survival rate after 80%. transplantation is between 60% and 80%. Unfortunately, in about 50% of those chronic hepatitis who receive a transplant, the infection recurs.

## **Nutrition and Dietary Supplements**

Although no special diets have been shown to help treat acute hepatitis, eating small snacks during the day, with larger ones in the morning, may be recommended. Eating this way helps optimize digestion, prevent weight loss, and reduce nausea. Avoid drinking alcohol as this may further damage the liver.

## Alpha-lipoic acid combination

There have been several case reports of use of alpha-lipoic acid in combination with silymarin (milk thistle) and selenium to help treat hepatitis C. Alpha-lipoic acid is an antioxidant that makes and is also available as a supplement. Experts suggest that additional alpha-lipoic acid may prove useful in the treatment of chronic hepatitis because it relieves stress on the liver and helps rid the body of toxins.

#### Cysteine (N-acetyl-L-cysteine [NAC])

Cysteine is an amino acid that can be found in many proteins throughout the body. It is thought to help detoxify harmful substances in the body. NAC supplements may help treat hepatitis C when combined with standard medical therapy.

#### S-Adenosylmethionine (SAMe)

It may provide protection against liver damage and scarring and may improve survival rates in people with cirrhosis due to alcohol abuse. It may protect the liver from damage after acetaminophen overdose. While the results for treating liver damage from either alcohol or acetaminophen over dose are encouraging, more research is needed.

#### Selenium

Selenium (found, for example, in fish, Brewer's yeast, wheat germ, garlic, whole grain,) is an essential mineral found in trace amounts in the body. Lower than normal selenium levels may be associated with an increased risk for liver cancer in people with hepatitis B and/or C. Low selenium levels may also worsen the toxic effects of alcohol on the liver. There have been a few case reports of selenium of the use combination with alpha-lipoic acid and silymarin (milk thistle) to help treat hepatitis

## Spirulina

Spirulina have anti-viral effects, is considered a complete protein because well over half of it consists of amino acids. It is

also a rich source of other nutrients including B complex vitamins, carotene, vitamin E, carotenoids, manganese, zinc, copper, iron, selenium, and gamma linolenic acid. There is some preliminary evidence suggesting spirulina may help protect against liver damage and cirrhosis in those with chronic hepatitis.

#### Zinc

Zinc supplements may improve the response to interferon therapy in people with chronic hepatitis C. More research would be helpful. Herbs

#### Milk thistle (Silybum marianum)

Milk thistle is widely used in the treatment of hepatitis (particularly hepatitis C). Some researchers have found improvements in liver function in those with viral hepatitis taking milk thistle, while others have failed to detect these benefits. None of the studies have compared milk thistle with interferon or other conventional medications for this condition.

#### Licorice root (Glycyrrhiza glabra)

Licorice root has been used in both Eastern and Western medicine to treat a variety of illnesses, including liver disease. In one study of Japanese patients with hepatitis C, those who received intravenous treatment with glycyrrhizin, cysteine, and glycine for an average of 10 years were significantly less likely to develop liver cancer and cirrhosis than those who received placebo. In patients with hepatitis C, glycyrrhizin significantly improved liver function after only one month. These effects diminished glycyrrhizin treatment after discontinued.

### Green tea (Camellia sinensis)

One of the active ingredients in green tea, known as catechin, may help treat viral hepatitis. In these studies, catechin was isolated from green tea and used in very high concentrations. It is not clear at this time whether drinking green tea confers these same benefits.

#### Others

Other herbs that may be considered include:

Turmeric (Curcuma longa) -turmeric has been shown to have a
protective effect on the liver. This
may be related to turmeric's ability
to help clear toxins.

Astragalus (Astragalus membranaceus) -- This herb is also used for its immune enhancing properties, especially prevention and treatment of the common cold and chronic hepatitis.

#### Acupuncture

Acupuncture is generally used in China and other countries to boost the immune system of those with hepatitis. There has been some concern that patients could contract hepatitis from dirty needles and/or infected practitioners

## Massage and Physical Therapy

Therapeutic massage may be helpful enhancing immune function.

### Homeopathy

- Aconitum used during initial of hepatitis when individual has a fever, jaundice, and sharp pains in the liver; can be used in newborns
- Belladonna— used in early stages of hepatitis when the individual has occasional liver pains that are worsened by inhalation and movement
- Chelidonium- for individuals with pain that originates in the liver and extends to the back and right shoulder; this remedy is appropriate for individuals who have gray or yellow loose stools, fever, and jaundice; a craving for milk may be present; lying on the left side and ingesting hot food or drink may bring some relief
- China- for individuals with a tender liver and a sensation of fullness in the stomach; individual may burp frequently although it provides no relief; he or she may also have cravings for sweets, cold drinks, or coffee
- Lycopodium- one of the primary remedies for hepatitis in children and adults; this remedy is most appropriate for individuals who feel tension in the liver area, have difficulty standing up, and feel full after eating only small amounts of food
- Mercurius- for individuals with a swollen, tender liver and jaundice:

the tongue may also be yellow and this remedy appropriate for individuals with clammy perspiration, excessive salivation. sensitivity a temperature variations, and bleeding gums; lying on the right side is painful and stools may be light gray or green

Phosphorus— for individuals with burning pains under the right rib cage and in the back between the shoulder blades that are relieved by cold drinks; this remedy may be used in newborns with jaundice

## Traditional Chinese Medicine (TCM)

When assessing a person with hepatitis, a TCM practitioner might make one of the following diagnoses:

- Hepatic qi stasis
- Hepatic yang excess with vin deficiency
- Hepatic yin insufficiency

popular TCM herb, Phyllanthus amarus, was not supported in these reviews, however, as an effective therapy for viral hepatitis, despite popularity of its use for this purpose. Glycyrrhizin is frequently used in TCM.

## **Other Considerations**

Food handlers should be extremely careful in the case of hepatitis A and healthcare workers should always exercise universal precautions, as described earlier in the section entitled. Prevention, to contraction or transmission of hepatitis B or C. It is often difficult to cope with having this particular disease.

Pregnancy

and hepatitis C can Hepatitis B transmitted during pregnancy or childbirth. Women who are pregnant or planning to pregnant soon interferon or nucleoside analogues.

**Warnings and Precautions** 

Because the liver processes many types of medications, you will most likely be advised to stop taking all drugs other than those recommended for treatment. Similarly, certain herbs and supplements are

known to cause harm to the liver: Kava kava can be toxic to the liver and cause severe hepatitis and even liver failure if taken excessively.

• Vitamin A in large quantities can be toxic to the liver.

## **Prognosis and Complications**

In terms of the acute phase of hepatitis, jaundice generally disappears in two to eight weeks. Occasionally, hospitalization is necessary during the acute phase, but most people completely recover. Full recovery of normal liver function tests, however, may take up to several months.

Rare yet serious complications of acute hepatitis include aplastic anemia, which can be fatal, pancreatitis, very low blood sugar, and polyarteritis. Also quite rare is the acute phase of hepatitis leading to liver failure (called fulminant hepatitis) with bleeding from the gastrointestinal tract and brain damage, known as hepatic encephalopathy. Occasionally, the acute phase of hepatitis B or C is more mild yet prolonged, with recovery taking up to one year; 5% to 10% of people with this prolonged acute phase go on to develop chronic hepatitis.

After the acute phase, long-term prognosis depends on many factors, including the cause of the hepatitis, whether you go on to become a carrier of type B or develops a

chronic form of the disease, and whether you have any other underlying medical problems. Approximately 5% to 10% of people with hepatitis B become carriers and about 25% of carrier's progress to chronic hepatitis. The vast majority of people infected with hepatitis C go on to become life-long carriers and anywhere from 50% to 90% of these carriers go on to develop chronic hepatitis.

The chronic form of hepatitis can ultimate lead to scarring of the liver (known as cirrhosis) and liver failure. There are two types of chronic hepatitis – chronic active and chronic persistent. The latter is mild and either doesn't get worse or only does so very slowly. Chronic active hepatitis, on the other hand, is much more likely to lead to cirrhosis, permanent damage to the liver. Cirrhosis occurs in 5% to 10% of those with chronic hepatitis from hepatitis B and as many as 20% to 30% of those with chronic hepatitis from hepatitis C. Approximately 14% of people with cirrhosis develop liver cancer.

## 69.Herpes Simplex Virus; Cold Sores (HSV)

Herpes simplex virus (HSV) infections are very common worldwide. HSV-1 (often called oral-facial herpes) is transmitted through kissing or sharing drinking utensils, and HSV-2 (often called genital herpes) through sexual contact. Both HSV-1 and HSV-2 can cause infections around the face, mouth, and genitals. The infection may not show symptoms for a long time, and then become activated by exposure to the sun, fever, menstruation, emotional stress, a weakened immune system, or acute illness. In between herpes outbreaks, the virus lies dormant in nerve cells. Recurrent HSV-1 infections on the lip are often mild and are commonly referred to as cold sores or fever blisters. HSV-2 lesions tend to recur more often and to be more severe than HSV-1 infections. In infants and in people who have weak immune systems or herpes infections that affect the eyes are serious and potentially life-threatening. and another and the see would

### Signs and Symptoms

- Small grouped blisters in the infected area like the genitals (namely, penis scrotum, vagina, cervix, or labia), around the genitals (such as anus or inner thighs) mouth, lips, tongue, gums, or throat; the blisters can then become ulcers (raw sores) and later crust over
- Burning, itching, pain, or tingling sensations often precedes the appearance of the blisters
- Enlarged lymph nodes near the infected area
- Fever, headache, and flu-like symptoms (such as muscle aches and malaise), particularly when you first contract the virus
- Vaginal or penile discharge
- Pain with urination

#### Causes

HSV-1 is transmitted through saliva; therefore, kissing someone with HSV-1, drinking from the same instrument, or participating in oral-genital sex with someone who has HSV-1 can cause you to contract the virus.

HSV-2 is a sexually transmitted disease meaning that it is transferred from one sexual partner to another through genital secretions. Herpes simplex may be transmitted even if the infected person does not have active symptoms or visible lesions. Also, a mother can pass the infection to her baby during vaginal birth, especially if there are active lesions around the vagina at the time of delivery.

### Risk Factors Oral herpes

Everyone is at risk for oral herpes from HSV-1, including children many of whom are already infected by age three.

## Genital herpes

All sexually active people are at risk for acquiring genital herpes. Having multiple sexual partners puts you at even greater risk.

#### Other factors

Immunosuppressed individuals are a increased risk for severe cases of herpes.

### Diagnosis

In many instances, able to make the diagnosis of herpes from physical appearance of the lesions and no tests are required. If doctor is not 100% certain, however, then fluid from the blisters can be removed and tested for the herpes simplex virus. This can be done through viral cultures. which is very accurate but generally takes 2 to 3 days to get the results and make an official diagnosis. Another more immediate, but less accurate, approach is to do a Tzanck test of the skin lesions. This involves taking a sample of fluid from the blisters, staining the fluid with a dye, and examining the stained fluid under the microscope looking for a characteristic appearance of the virus. Finally, there is a blood test that may be helpful for making a diagnosis, especially if herpes simplex is suspected but no symptoms are present or if a distinction between HSV-1 and HSV-2 is needed.

## **Preventive Care**

Some measures that may help, however, are described below.

If you do not have herpes:

 Avoid direct contact with cold sores or genital herpes lesions on other people. For example, avoid sexual intercourse altogether when your partner has active lesions. At other times, use latex condoms, which can help avoid but not eliminate sexual transmission of genital herpes.

• Wash items that may have saliva or other bodily fluid from someone with oral herpes in boiling water before you use (like razor blades, drinking cups or glasses, etc.)

 Do not share certain items (like a toothbrush, razor, etc.) with an infected person, especially when herpes lesions are active.

If you do have herpes:

- Avoid precipitating causes like sun exposure and try to reduce your stress level.
- Avoid performing oral sex when you have active herpes lesions on or near your mouth.
  - Use latex condoms even when lesions are not present and avoid sexual intercourse altogether when you have active lesions.

#### **Treatment Approach**

Herpes cannot be cured, so the goals of treatment include reducing the number of recurrences and lessening symptoms when you have an outbreak. Even without any intervention, oral herpes lesions generally subside in no more than 1 to 2 weeks. Using medications may shorten the course and decrease the discomfort. Some cases of genital herpes may be quite mild and not need any treatment. In severe or prolonged cases, however, as well as herpes infections if you are immunosuppressed or if you have frequent recurrences, medications that fight the virus may be needed. In addition to physical relief of symptoms and reducing frequency of outbreaks, coping with the emotional and social aspects of having genital herpes is part of treatment.

Lifestyle

Taking lukewarm baths or applying ice to herpes lesions may help reduce pain, burning, or other discomfort. It is important to cleanse the infected area with soap and water, which may help avoid local spread of herpes from the active blisters to surrounding areas on your skin. After bathing or washing, it is important to

completely dry the affected area. Wear cotton underwear and avoid tight fitting clothes as they can restrict air circulation and slow the healing of lesions. Coping with the emotional and social aspects of having genital herpes can be challenging.

## Medications

Antiviral medicines may help shorten the duration of a herpes outbreak. If you have 6 or more recurrences of genital herpes per year, doctor may recommend use of antiviral medicines at all times to prevent such frequent outbreaks. Medications that may prescribe include:

- Acyclovir
- Famciclovir
- Pancyclovir
- Valacyclovir

For maximum benefit during recurrences, medication should be started as soon as you experience the tingling, burning, itching, or other sensations that often precede the appearance of the herpes lesions. Acyclovir given intravenously in the hospital is sometimes needed if you have an infection involving the brain, eyes, or lungs or if you are in a group at high risk for complications. Foscarnet, another antiviral agent that is delivered powerful and also intravenously, may be necessary if herpes lesions are resistant to acyclovir or the other medications listed.

#### Nutrition and Dietary Supplements Lysine

Lysine supplements have been used to help treat or prevent mouth and genital lesions by herpes. Taking supplements or increasing lysine in your diet (from foods like fish, chicken, eggs, and potatoes) may speed recovery time and reduce the chance of recurrent breakouts of the herpes infection. If you have high high cholesterol, heart disease, triglycerides, it is best, at this point, not to use lysine because animal studies suggest that this supplement may raise cholesterol and triglyceride levels.

## **Propolis**

Propolis, a resin from tree bark and leaves, is loaded with flavonoids. A study of a small number of people with genital herpes compared an ointment made from propolis to acyclovir ointment. In this research trial, the lesions of those using the propolis

healed more quickly than those using acyclovir. Research on larger numbers of people would be helpful. In the interim, it may be worth trying propolis ointment for genital herpes lesions if doctor approves.

#### Spirulina

Spirulina has activity against certain viruses including herpes.

#### Zinc

Topical preparations of zinc have shown benefit in relieving symptoms and preventing recurrences of oral herpes lesions.

#### Herbs

#### Aloe (Aloe vera)

Preliminary evidence suggests that aloe gel used topically may improve the symptoms of genital herpes. Whether this same use of aloe will apply to oral herpes lesions is not known, but it may be worth trying in order to reduce the length and severity of symptoms.

Lemon Balm (Melissa officianalis) Some studies suggest that topical ointments containing lemon balm may help heal herpes cold sores. Those who applied lemon balm cream to their lip sores experienced significant improvement in redness and swelling after only two days. Although other symptoms (such as pain and scabbing) did not improve, both the participants and their physicians reported that the lemon balm ointment was highly effective.

Peppermint Oil (Mentha x piperita) In test tubes, peppermint oil has exhibited antiviral properties against a number of infectious agents, including herpes. Whether this would translate into help for relieving herpes lesions is not known at this point.

#### Sage-Rhubarb Cream

In one Swiss study, a cream made from sage (Salvia officinialis) and rhubarb (Rheum palmatum) lessened the length of time that herpes lesions were present to the same extent as the medication acyclovir.

# Siberian Ginseng (Eleutherococcus senticosus/Acanthopanax senticosus)

People with HSV-2 found that Siberian ginseng reduced the frequency, severity, and duration of outbreaks. This herb should not be given to children and should not be taken if you have high blood pressure, obstructive sleep apnea, narcolepsy (frequent day time sleeping), are pregnant or breastfeeding.

#### Tea Tree Oil (Melaleuca alternifolia)

Use of tea tree oil, applied topically in gel form, has some popularity for herpes lesions on the lips. First, in test tubes, tea tree oil has the ability to fight both strains of herpes viruses (HSV 1 and HSV 2). Secondly, there has been one small study comparing use of tea tree oil gel to placebo in those with recurrent oral herpes.

#### Others

Additional herbs that may be recommended by an herbal specialist for the treatment of either oral or genital herpes include:

Pau d'Arco (Tabebuia avellaneda) Although Echinacea (coneflower) gained some popularity for the prevention of herpes, there is no scientific evidence that it works for this purpose. To try to prevent herpes outbreaks. herbalists may consider remedies that help strengthen your immune system or act as adaptogens.

### Acupuncture

Case reports in the scientific literature suggest that acupuncture may help reduce the length of time of a herpes outbreak and decrease your chances for recurrent lesions.

Massage and Physical Therapy

Regular massage can help alleviate chronic therefore, in theory, massage on a regular basis may help avoid recurrent outbreaks. Aromatherapy, massage method using essential oils, is one that has been evaluated for these purposes and results thus far suggest that this is a useful technique.

#### Homeopathy

For lesions around the lips and mouth:

- Natrum Muriaticum -- for eruptions at the corners of the mouth that occur during periods of emotional stress and tend to worsen in the daytime
- Rhus toxicodendron -- for eruptions consisting of many small blisters that itch intensely at night
- Mercurius -- for children who drool and may have a fever
- Sepia -- for outbreaks that do not improve with other homeopathic remedies; this remedy is most appropriate for individuals who tend to have a lack of energy and don't tolerate cold weather

For genital lesions:

- Graphites -- for large, itchy lesions in individuals who are overweight
- Natrum Muriaticum for eruptions that occur during periods of emotional stress and symptoms that tend to worsen in the daytime
- Petroleum -- for lesions that spread to anus and thighs; symptoms tend to worsen in winter and improve in summer
- Sepia -- for outbreaks that do not improve with other homeopathic remedies; this remedy is most appropriate for individuals who tend to have a lack of energy and don't tolerate cold weather

## Mind/Body Medicine **Support Groups**

Having genital herpes can impact social and emotional life and many find it quite difficult to cope with this. It is quite common to feel depressed, angry, and even guilty. Worrying about possible rejection by someone with whom you are hoping to become intimate is also typical. Joining a support group in which members share common experiences and problems can help alleviate these stresses associated with having genital herpes. Seeing a couples' therapist with a committed partner may also be helpful for working through some of these issues.

## **Relaxation Techniques**

Using relaxation techniques, such as yoga, guided imagery, and meditation, on a daily basis may help you feel better overall and cope with your stresses related to having herpes.

Self-Hypnosis

In a 6-week training program to learn how to hypnotize oneself using guided imagery, frequently participants with genital herpes were able to reduce their outbreaks by nearly 50% and improve their feelings mood, including reducing depression and anxiety.

#### Other

psychiatrist, Individual therapy with a psychologist, or social worker as well as therapeutic biofeedback are other approaches that can help reduce symptoms associated with herpes and reduce one's tendency to withdraw from social situations if you have genital herpes.

## **Traditional Chinese Medicine**

A traditional Chinese physician would likely prescribe topical herbal remedies consisting of a combination of herbal extracts to treat oral or genital herpes.

### Other Considerations Pregnancy

Herpes viruses can be transmitted to a newborn during vaginal delivery in mothers infected with herpes viruses, especially if the mother has active lesions in the vagina at the time of delivery. If you do have active lesions at that time, delivery by cesarean section will be recommended to avoid infecting your baby.

### **Special Populations**

baby Newborn herpes infections contracted during delivery from the mother can lead to meningitis, herpes infection in the blood, chronic skin infection, and may even be fatal. If your immune system is suppressed (from, for example, human immunodeficiency virus [HIV], receipt of chemotherapy for cancer, long term use of high doses of steroids, or use of medications that intentionally suppress the immune system such as following organ transplant) are more likely to suffer from complications of herpes and are more likely to have severe, frequent outbreaks.

#### Warnings and Precautions

If you are diagnosed with genital herpes, you should be tested for other sexually transmitted diseases like chlamydia and gonorrhea.

#### **Prognosis and Complications**

Herpes is a chronic, recurrent infection. The initial symptoms usually appear within 1 to 3 weeks of exposure to the virus and last 7 to 10 days (for oral lesions), 7 to 14 days (for genital lesions). Usually the number of outbreaks is greatest in the first year and higher for HSV-2 genital lesions than HSV-1 oral lesions. Each year after that, the number of outbreaks typically diminishes and they become progressively less severe. But, you can never completely get rid of the

#### Complications of herpes include:

- Herpetic keratitis herpes infection of the eye leading to scaring within the cornea and possible blindness
- Persistent herpes infection, without lesion-free periods
- Herpes infection in the esophagus
- Herpes infection of the liver which can lead to cirrhosis (liver failure)
- Encephalitis and/or meningitis serious brain infections
- Lung infection
- Eczema herpetiform widespread herpes across the skin

## 70.Hirutism; Hair Growth, Excessive

Hirsutism is excessive growth of dark, coarse body and facial hair in women. The abnormal hair growth typically occurs in a pattern seen in adult males. While some body and facial hair growth is normal, women with hirsutism tend to produce elevated levels of male sex hormones called androgens from their ovaries and adrenal glands. Most cases of hirsutism are not excessive and have no underlying cause, but some may indicate the presence of a more condition, such serious underlying Cushing's syndrome.

Signs and Symptoms

The primary signs and symptoms hirsutism include:

- Hair growth on the abdomen, breasts, and upper lip
- Irregular menstrual periods .
- Acne
- malodorous Abnormally perspiration
- Loss of feminine body shape
- Signs of masculinity deepening voice, frontal balding, enlarged clitoris, enlarged shoulder muscles
- Cushing's syndrome a condition marked by obesity (especially around the abdomen), high blood pressure, diabetes, and thinning of the skin

#### Causes

Identifiable causes of hirsutism generally related to increased secretion of androgens from the ovaries or adrenal glands. This can result from a variety of conditions, including:

- Polycystic ovarian syndrome (PCOS) - often associated with infertility
- Tumors on the adrenal glands or ovaries
- Cushing's syndrome
- Severe insulin resistance
- Obesity

Hirsutism may also be caused by:

- Medications that can cause hair growth phenytoin, minoxidil. diazoxide, cyclosporine. and hexachlorobenzene
- Anorexia nervosa
- Anabolic steroids
- Danazol a substance used to treat endometriosis
- Hormone replacement therapy (HRT) containing androgens
- Birth control pills containing high levels of androgen hormones

#### Risk Factors

- Genetics hair patterns are inherited
- Anorexia nervosa
- Race and ethnicity the condition is more common in women predominantly of European ancestry than it is in those of Asian, native American or African ancestry; it is also more common in dark-skinned women
- Menopause
- Obesity

#### Diagnosis

The first step is to conduct a physical examination. During the physical exam, the physician will inspect the body for all sites of abnormal hair growth and will ask questions about the onset and progression of the condition. A physician may also perform a pelvic examination to determine whether tumors or cysts are present on the ovaries. After performing the physical examination. one of the following may be necessary to identify the cause of hirsutism:

Laboratory tests detect elevated androgen levels

- CT scan, MRI, pelvic ultrasound. used to identify cysts or tumors on the ovaries or adrenal glands
- Laparoscopy -an instrument is inserted into the abdominal wall to detect cysts or tumors on the ovaries

### **Preventive Care**

Even if an individual is at risk for hirstutism, there are steps she can take to prevent it. For example, studies suggest that obese women with PCOS may be less likely to develop hirsutism if they consume a lowcalorie diet

## **Treatment Approach**

The specific treatment for hirsutism depends on the extent of the problem, whether or not an underlying causes can be identified, and if so, what the root of that cause is. If a tumor is located on the ovaries or adrenal glands, the physician will likely recommend that it be surgically removed. Overweight individuals with hirsutism may be urged to participate in a weight loss program since calorie restriction may lower androgen production in the body. Some drugs may suppress androgen secretion and reduce hair growth. If no underlying cause that can be treated by conventional medication is identified, it may be possible to control the symptoms of hirsutism with acupuncture, and cosmetic therapies that conceal or remove excess hair (such as bleaching and waxing). Psychological support may also be helpful since hirsutism is often a frustrating and embarrassing condition.

#### Lifestyle

Eating a balanced diet and getting adequate exercise can help control weight, which may diminish or prevent hirsutism related to obesity.

#### Medications

Certain medications may be used to suppress the production and secretion of androgens in the body. Up to 70% of individuals with hirsutism may respond to these medications, but it can take 6 months or longer for the medications to effectively reduce hair growth and they must be taken indefinitely to keep the symptoms under control. These medications include:

Glucocorticoids Dexamethasone)

- Certain birth control pills with low levels of androgen hormones, such as desogestrel or norgestimate
- Spironolactone

## **Surgery and Other Procedures**

A physician may recommend the following surgical procedures in severe cases of hirsutism:

- Tumor removal if a tumor on the ovaries or adrenal glands is the cause
- Ovary removal after childbearing years - if ovaries are producing elevated levels of androgens

## **Nutrition and Dietary Supplements**

Obese women with PCOS who lose weight by limiting their overall calorie intake may experience reduced symptoms of hirsutism. Interestingly however, restricting fat intake alone does not appear to have any added benefit for reducing symptoms of hirsutism.

#### Herbs

Two laboratory studies have shown that an extract of saw palmetto (Serenoa repens) may inhibit androgen activity in human cells. Professional herbalists may also recommend the following herbs:

- Black cohosh (Cimicifuga racemosa)
- Goats rue (Galegae officinalis herbal)
  - Fenugreek (Trigonella foenumgraecum)
  - Chaste tree (Vitex agnus-castus)

#### Acupuncture

Women with hirsutism found that acupuncture markedly reduced both hair density and hair length and significantly reduced their levels of the male sex hormone testosterone. This study is promising, but further research will be required.

# Other Considerations Warnings and Precautions

Certain herbs and dietary supplements may boost androgen levels thereby promoting hirsutism. Those with the condition should therefore avoid them. These include:

- Dehydroepiandrosterone (DHEA)
- Pregnenolone
  - Licorice root (Glycyrrhiza glabra)

#### Pregnancy

- Medications that alter androgen levels should generally not be taken during pregnancy; a physician can provide guidance and appropriate medical care.
- Hair growth may increase during the third trimester, especially on the face, extremities, and breasts. This hair growth is considered normal and is not a sign of hirsutism.

### **Prognosis and Complications**

Long-term medication, when appropriate, will slow hair growth, but it generally won't eliminate existing hair patterns on the face and body. There are some cosmetic therapies that can reduce the appearance of excessive hair growth and experience psychological stress.

## 71.Histoplasmosis; Parasitic Infection

Histoplasmosis is a fungal infection caused by the organism *Histoplasma capsulatum*. The infection is usually mild and asymptomatic, but in approximately 5% of cases it causes a sudden, short-term (up to 10 days), flu-like respiratory illness. In very rare cases (1% to 5%) it can produce serious syndromes that progress rapidly and may result in death. Because of the similarity in symptoms, histoplasmosis is sometimes mistaken for tuberculosis.

## Signs and Symptoms

- Acute, flu-like infection includes fever, chills, cough, chest pain, and headache
- Chronic lung infection develops gradually over weeks to months and produces a progressive, worsening cough, weight loss, night sweats, and possibly, shortness of breath

When the disease spreads throughout the body and affects many organ systems, a person may experience fever, chills, weight loss, enlarged liver and spleen, swollen

lymph nodes, ulcers in the mouth, stomach ulcers that may bleed, infection of heart valves, meningitis, anemia, and elevated calcium levels.

#### Causes

The primary cause of histoplasmosis is exposure to the organism H. capsulatum, which is found primarily in mild climates worldwide. H. capsulatum grows in moist soil that is rich in nitrogen or in areas contaminated with bird or bat droppings, such as attics, barns, caves, and city parks. The spores of H. capsulatum are inhaled into the lungs and transformed into the yeast form of the fungus. The yeast multiplies in lung cells, but usually do not spread to other parts of the body in individuals with healthy immune systems. In those with weakened immune systems, the yeast may spread to the lymph nodes, liver, spleen, bone marrow, adrenal glands, and gastrointestinal tract.

#### **Risk Factors**

- Exposure to soil contaminated with bird and bat droppings
- Residence in areas histoplasmosis is prevalent
- Construction-related activities, such as bulldozing or demolition, that disturb contaminated soil
- Conditions that suppress immune system, including AIDS, corticosteroid therapy, organ transplantation, and chemotherapy
- Lung disease
  - Spelunking (exploring caves)
  - Male gender
  - Very young or very old age
  - Cigarette smoking

#### Diagnosis

Because most cases of histoplasmosis produce no symptoms, the condition can be difficult to diagnose. In addition to a physical exam, a physician may perform the following tests to confirm the diagnosis:

- Blood test
- Mucus test
- Urine test
  - Chest X ray

## **Preventive Care**

The best solution to the problem of histoplasmosis is to avoid exposure to H. capsulatum, the organism that causes the infection. The following steps may help

- Wear masks or respirators when exposed to areas contaminated by bird or bat droppings
- Spray contaminated areas with 3% formalin (this will kill the fungus)

## **Treatment Approach**

Mild cases of histoplasmosis usually require minimal treatment, such as bed rest and analgesics. More serious cases of histoplasmosis, with symptoms that include a high fever, respiratory distress, loss of appetite, and malaise, are treated with antifungal medications.

#### Medications

Medications used to treat histoplasmosis inhibit the growth of fungi in the body. These medications are often used in severe cases when the infection has spread to various organs and tissues throughout the body.

- Amphotericin B (intravenous)
- Intraconazole (oral)
- Ketoconazole (oral)

## Surgery and Other Procedures

- Laser photocoagulation procedure used to prevent visual impairment when infection spreads to the eyes
- Surgical resection procedure used to remove heart valves infected with H. capsulatum

## **Nutrition and Dietary Supplements** N-acetylcysteine

This supplement may be effective in treating lung infections such as histoplasmosis. Laboratory studies indicate acetylecysteine may scavenge free radicals in lung tissue.

#### Herbs

#### Garlic (Allium sativum)

Extracts of garlic (Allium sativum) may inhibit the growth of H. capsulatum and enhance the therapeutic effects amphotericin B.Individuals with weakened immune systems who are required to take high doses of amphotericin B to treat histoplasmosis may benefit from a shorter treatment period at a lower dose with garlic supplementation. A trained herbalist may also recommend the following antifungal herbs to treat histoplasmosis:

Grapefruit seed extract

• Bromelain (Ananas comosus)

# Other Considerations Warnings and Precautions

The medications used to treat histoplasmosis may interact adversely with the antihistamine medications terfenadine and astemizole, possibly producing abnormal heart rhythms. Individuals with histoplasmosis should avoid supplementation with vitamin D and calcium; they may worsen the condition and promote the spread of infection throughout the body.

## **Prognosis and Complications**

- Formation of fibrous tissue in the lining of the chest wall cavity, which may compress the esophagus, heart, or lungs, affecting their ability to function properly
- Enlargement of lymph nodes may constrict airway, esophagus, or

large blood vessels in the chest region

- Scar tissue in the lungs
- Blindness may occur if infection spreads to the eyes

Many cases of histoplasmosis are mild and resolve in 10 days without treatment. In the most severe cases, particularly when the spreads to various organs infection throughout the body, long-term therapy with antifungal medications may be necessary. Individuals who contract histoplasmosis in areas where infection is prevalent may experience a second infection - even after adequate treatment - but the second infection is usually milder than the first. Relapse is more likely in those with weakened immune systems, although it can happen in individuals with healthy immune systems as well. In general, however, histoplasmosis produces no long-term complications and is rarely fatal.

## 72.Acquired Immunodeficiency Syndrome (AIDS/HIV)

"An ounce of prevention is worth a pound of cure."

-Anonymous

Acquired immunodeficiency syndrome, or AIDS, is a worldwide health problem. AIDS is caused by the human immunodeficiency virus (HIV), which attacks a specific type of white blood cells known as T-lymphocytes. It is measured in the blood as the CD4 count, which is a marker on the T cells; the lower the CD4 count, the weaker the immune system. About 20 million people throughout the world—heterosexuals and homosexuals alike—are infected with HIV; in 1997, 35% of HIV infections occurred in heterosexuals.

A massive research effort has produced better treatments, resulting in longer survival and improved quality of life for those with access to the treatments. But there is still no vaccine or cure. The only real defense against AIDS is prevention.

Signs and Symptoms

Primary or initial infection: generally, a flulike syndrome that occurs in 50 to 80% of those who contract HIV within 2 to 6 weeks, including a combination of the following symptoms:

- Fever
- Sore throat

- Swollen lymph nodes
- Joint pain
- Muscle aches
- Rash
- Mouth ulcers
- Nausea
- Diarrhea
- Headache

Early HIV infection: generally occurs when the CD4 count is below 500/microliter; sometimes called pre-AIDS or AIDS-related complex (ARC) there is a long latency phase (median time of 10 years) between the initial contraction of HIV and early infection.

- Swollen lymph nodes throughout the body
- Lesions on the tongue or mouth, which may represent a fungal infection called Candida or one called Hairy Leukoplakia
- Low platelet count, which may manifest as easy bruising, bleeding gums, or nose bleeds
- Herpes lesions of the mouth or genitals

- Shingles
  - Skin infection
  - Genital warts

Advanced stage HIV, often called AIDS: generally occurs when the CD4 count is below 200/microliter and is usually marked by the development of opportunistic infections. Pneumonia, including Pneumocystis carinii (PCP)

- Tuberculosis
- Extreme weight loss and wasting; exacerbated by diarrhea which can be experienced in up to 90% of HIV patients worldwide
- Meningitis and other brain infections
- Fungal infections
- Syphilis
- Malignancies such as lymphoma, cervical cancer, and Kaposi's sarcoma (KS) (affects the skin and oral mucosa and may spread to the lungs; KS can actually occur in earlier stages of HIV as well.

#### What Causes It?

Infection by the human immunodeficiency virus (HIV) causes AIDS. Seventy percent of HIV transmission occurs through sexual contact. Intravenous drug users transmit HIV by sharing needles. Blood transfusions and blood products caused many infections in the early years of the epidemic, but screening procedures have nearly eliminated this risk in the developed countries. In addition, a mother can spread the virus to a newborn during delivery and through breast-feeding.

## What to be done

Order a blood test to detect antibodies against the virus. If this test is positive, the doctor will order a CD4 count and a viral load: this information, along symptoms, helps assess the advancement of the HIV disease process and assists doctor in determining the best course of treatment for you, including the appropriate tests and medications. For example, if you are experiencing shortness of breath, a chest X ray will likely be ordered, particularly if CD4 count is low. Stool studies may be requested if you have diarrhea and, if you have any neurological symptoms, your provider may recommend an imaging study of brain and/or analysis of the spinal fluid.

Some symptoms and tests may require evaluation in the hospital.

## **Treatment Options**

There are valuable medications that slow the progression of HIV infection to full-blown AIDS; a combination of these medicines, including a type called protease inhibitors, is used. In addition, antibiotics and other therapies are used to prevent or treat specific complications. It is important to have care directed by a doctor who specializes in HIV; he or she will know the most effective treatment for you, including the most current medical regimen, what alternative treatments are safe, and which combinations may be harmful.

## Drug Therapies

- Antiretrovirals (e.g., zidovudine, lamivudine, efavirenz, ritonavir, indinavir) - help slow progression of HIV; must be taken as directed to avoid development of viral strains that no longer respond to the medication
- Prophylaxis medicines used to prevent opportunistic infections; started when the CD4 count drops to a certain number (e.g., CD4 < 200/microliter, medication to prevent PCP is begun)
- Treatment appropriate treatment particular depends on the opportunistic infection or symptoms and should be determined by HIV specialist

#### Alternative Complementary and **Therapies**

In fact, surveys show that:

• 52 to 68% of those with HIV take vitamins, herbs, or supplements

• 64% do aerobic exercise, while 33% do other forms of exercise such as yoga or strength training

• 22 to 54% obtain bodywork such as energy healing, or massage, acupuncture

• 38 to 56% use prayer or other forms of spiritual practice

• 42% attend group support

 33 to 46% practice meditation of other forms of relaxation such as breathing exercises

While only 26% of doctors ask about these practices, 63% admit that they do want to know if their HIV-positive patients are using such alternatives and believe that they are helpful.

Nutrition

Weight loss has historically been a serious problem for people with HIV. symptom may begin early in the course of the disease and can increase the risk for developing opportunistic infections. Weight loss is exacerbated by other common symptoms of AIDS, including lesions in the mouth and esophagus, diarrhea, and poor appetite. Over the last several years, weight loss has become less of a problem due to the new protease inhibitors used for treating HIV: reduction of muscle mass, though, remains a significant concern. Dietitian to develop a meal plan to prevent weight loss and muscle breakdown is extremely helpful. In a well-designed study comparing the use of a daily supplement regimen that included the amino acid glutamine (40 g per day), vitamin C (800 mg), vitamin E (500 IU), beta-carotene (27,000 IU), selenium (280 mcg), and N-acetylcysteine (2400 mg) to placebo, people who took the supplements gained significantly more weight. If true, it would support the fact that many people with HIV seem to have lower levels of, such as vitamins C and E, in their blood than those without HIV. Related to vitamin C, grapefruit juice may enhance the absorption of protease inhibitors. The antioxidant selenium (100 to 400 mcg per day) and a vitamin B complex (75 to 100 mg per day) may also be useful because of the physical stress of HIV. Cobalamin (vitamin B<sub>12</sub>) levels are occasionally low with HIV, in which case your doctor may prescribe monthly injections of vitamin B<sub>12</sub>. Low levels of vitamin A are also particularly severe among children infected with HIV. Vitamin A supplements may reduce the risk of death in children infected with HIV. Amounts generally used in the case of HIV

Vitamin C 1000 mg per day Vitamin E 400 to 800 IU per day Selenium 100 to 400 mcg per day Vitamin B complex 75 to 100 mg per day Herbs

In other words, both groups got better, but the group receiving the individualized herbal remedies experienced reduced pain and resolution of the blisters more quickly than the group receiving acyclovir, the medication usually used to treat shingles. In one study of 13 patients with human immunodeficiency virus (HIV) who refused to take conventional treatments, a dosage of 20 mg cat's claw per day for up to 5 months significantly increased white blood cell counts Although the use of herbs is standard in, and despite some promising test-tube and animal studies, human research in States of traditional Chinese medicinal herbs to help reduce levels of circulating HIV in the bloodstream have been inconclusive, showing no definitive help but no obvious harm. Test-tube studies of, an herb frequently used for, suggest that it may also be helpful against HIV. St. John's wort given to people with the virus, however, led to such intolerable side effects in one study that very few people were willing to complete the study. In addition, recent information from an article published in February 2000 shows that St. John's wort may lower levels of indinavir, a medication known as a protease inhibitor used to treat HIV. Test-tube studies of other herbs in the treatment of HIV, including licorice root, Calendulus officinalis flowers, and ginseng, have vielded some interesting results. Ginseng has also shown some possible benefits in human studies. More research is however. before drawing necessary. definitive conclusions about these herbal remedies for HIV. In addition. astragalus, two substances touted to enhance immune function in people with HIV, should not be used because they may actually enhance replication of the HIV

#### Homeopathy

No specific scientific research supports the use of homeopathy for HIV. A homeopathic doctor would evaluate you individually to assess the value of homeopathy for reduction of symptoms or side effects from medication as an adjunct to standard medical treatment.

#### **Physical Medicine**

Exercise is another way to help develop a general sense of well-being, improve mental attitude, decrease depression, diminish weight loss, and increase lean body mass. Resistance or weight training is particularly useful to increase strength and enhance lean body mass.

#### Acupuncture

People with HIV have used acupuncture to improve general well being, alleviate symptoms such as fatigue, insomnia, and night sweats, and to minimize side effects from medications. A small study published in 1999 showed that acupuncture used for people with peripheral neuropathy, caused occasionally by certain medications used for HIV. improved nerve function-each individual reported feeling less increased strength, and improved sensation, confirmed by measurable improvement in function. As mentioned earlier, diarrhea can be a major problem for people with HIV throughout the world. In China, acupuncture and moxibustion are standard treatments for HIV-related diarrhea.

## Massage

Massage may enhance the immune system and decrease anxiety, as demonstrated in a study of newborns specifically. Other forms

of stress reduction have shown improved CD4 counts in additional populations.

### Follow up

Frequent follow up with your doctor who specializes in HIV is very important; he or she will determine the frequency of those visits which may vary depending on the stage of your disease.

## **Special Considerations**

If you are HIV-positive and pregnant, taking antiretroviral medications will reduce the likelihood of transmitting the virus to baby; doctor will determine which medicine is best for you and safe for baby, Depending on own condition, physician may decide to postpone treatment until after first trimester to reduce the risk of birth defects. Efavirenz should be avoided throughout pregnancy. If you are HIV positive, you should not breastfeed because of the risk of transmission to baby.

## 73. Hypercholesterolemia; High Cholesterol

Cholesterol is a soft waxy substance that is a natural component of the fats in the bloodstream and in all the cells of the body. While cholesterol is an essential part of a healthy body, hypercholesterolemia increases a person's risk for cardiovascular disease, which can lead to stroke or heart attack. When there is too much cholesterol circulating in the blood, it can create sticky deposits along the artery walls. Plaque can eventually obstruct or even block the flow of blood to the brain, heart, and other organs. While heredity may be a factor for some people, increasingly sedentary lifestyles combined with diets high in saturated fats appear to be the main culprits. The normal range for total blood cholesterol is between 140 and 200 mg per deciliter (mg/dL) of blood. Levels between 200 and 240 mg/dL indicate moderate risk, and levels surpassing 240 mg/dL indicate high While total cholesterol level is important, it does not tell the whole story. There are two main types of cholesterol: low density lipoproteins (LDL) and highdensity lipoproteins (HDL). HDL is generally considered to be "good" cholesterol, while LDL is considered "bad."

Triglycerides are a third type of fatty material found in the blood. While their role in heart disease is not entirely clear, it appears that as triglyceride levels raise, levels of "good" cholesterol fall. It is the complex interaction of these three types of lipids that is thrown off when a person has hypercholesterolemia. Elevated levels of LDL cholesterol, normal or low levels of HDL cholesterol, and normal or elevated levels of triglycerides characterize high cholesterol.

## Signs and Symptoms

In its preliminary stages, high cholesterol generally occurs without any symptoms. For this reason, screening through routine blood tests is crucial for early detection. In its advanced state, however, high cholesterol may result in any of the following:

- Fat deposits in the tendons and skin (called xanthomas)
- Enlarged liver and spleen (which the physician may feel on exam)
- Severe abdominal pain as a result of pancreatitis (which may occur when triglyceride levels are 800 mg/dL or higher)
- Chest pain and even a heart attack.

Causes

In some cases, abnormally high cholesterol may be related to an inherited disorder. Certain genetic causes of abnormal cholesterol and triglycerides, known as hereditary hyperlipidemias, are often very difficult to treat. High cholesterol or triglycerides can also be associated with other diseases a person may have, such as diabetes. In most cases, however, elevated cholesterol levels are associated with an overly fatty diet coupled with an inactive lifestyle. It is also more common in those who are obese, a condition that has now reached epidemic proportions in the United States, affecting as much as half of the adult population.

Causes of high total and LDL cholesterol levels include:

- Hereditary hyperlipidemia (Types Ha or Hb)
- Diets high in saturated fats and 0 cholesterol
- Liver disease 0
- 0 Underactive thyroid
- 0 Poorly controlled diabetes
- Overactive pituitary gland 0
- Nephrotic syndrome characterized by elevated cholesterol, loss of protein in the urine leading to low levels of protein in the blood, and excessive fluid retention causing swelling
- Anorexia nervosa
- Medications such as progestogens, cyclosporins, and thiazide diuretics

## Causes of low HDL cholesterol include:

- Malnutrition
- Obesity
- Cigarette smoking
- Certain medications such as beta blockers and anabolic steroids
- Low levels of physical activity
- Polycystic ovarian syndrome

# Causes of high triglyceride levels include:

- Hereditary hyperlipidemia (Types I, IIb, III, IV, or V)
- Diets high in calories, especially from sugar and refined carbohydrates
- Obesity
- Poorly controlled diabetes
- Insulin resistance

- Alcohol use
- Kidney failure
- Stress
- . Pregnancy
- Polycystic ovarian syndrome
- Hepatitis
- 0 Lupus
- Multiple myeloma (a rare disease that occurs more frequently in men than in women and is associated with anemia, bleeding, recurrent infections, and weakness)
- Lymphoma (tumor of the lymphoid tissue)
- Certain medications such estrogens (available in either oral contraceptives or as part hormone replacement therapy for menopausal women). class corticosteroids, a cholesterol-lowering medications known as bile acid binding resins cholestyramine, (including colesevelam), colestipol, isotretinoin (used to treat acne).

#### Risk Factors

There are certain factors that put a person at increased risk of having high cholesterol. While some factors cannot be altered by changes in lifestyle, many can be changed. The most important risk factors for high cholesterol are:

- Obesity
- Diets high in saturated fat and trans fatty acids (found frequently in processed foods, such as those that have been hydrogenated or fried)
- Low fiber in the diet
- Physical inactivity •
- Stress
- Smoking cigarettes
- Living in an industrialized country
- Underactive thyroid
- Diabetes
- Polycystic ovary syndrome

#### Diagnosis

Since most people have few if any symptoms of hypercholesterolemia, blood screening is very important. An initial blood test is done to check a "random" measurement of total and HDL cholesterols. meaning that the test is performed at any time during the day, regardless of what has

been eaten. Those with abnormal levels (total cholesterol more than 200 mg/dL or HDL less than 40 mg/dL) will go on to have a test called fasting lipid profile (in which the person being tested refrains from eating for 8 to 12 hours, usually overnight, prior to the test). The fasting test will indicate whether or not total cholesterol levels fall within the normal range (between 140 and 200 mg/dL), are moderately high (between 200 and 240 mg/dL), or if they are in the very high range (240 mg/dL or greater). This blood test also reveals the levels of LDL, HDL, and triglycerides. According to guidelines released by the National Cholesterol Education Program (NCEP), the optimal level for LDL cholesterol depends on whether you have heart disease or not and whether there are other risk factors present for heart disease. The optimal level for HDL for all people is a measurement higher than 60 mg/dL; low levels are 40 mg/dL and below. Adults with normal total and HDL cholesterol levels should have their cholesterol checked every 5 years. Those being treated for hypercholesterolemia should have their cholesterol levels measured every 2 to 6 months and have liver function tests as well they on cholesterol-lowering medication.

#### **Preventive Care**

Changing eating habits is key in preventing high cholesterol. Other lifestyle changes that can reduce the risk of developing high cholesterol and cardiovascular disease include maintaining a normal weight and increasing physical activity.

#### Diet

The best ways to lower cholesterol through diet include the following:

- Reducing the amounts of saturated fat and cholesterol consumed each day
- Increasing daily consumption of fruits, vegetables, fish, and whole grains
- Supplementing the diet with other protective components such as fiber

There are a number of diets designed to keep cholesterol levels in check including the American Heart Association (AHA) diet, the Mediterranean diet, and the Ornish diet. While these three diets vary in some ways, they all emphasize whole grains and include fiber, fresh fruits and vegetables, lean protein, particularly soy and fish, and avoidance of saturated fats and trans fatty acids. These diets are outlined below.

The AHA Step I Diet is considered appropriate for the general population, including those who have normal cholesterol levels and want to prevent the development of high cholesterol. This diet calls for up to 55% of daily calories from carbohydrates, 15% from protein, and no more than 30% from fat. The diet also outlines quite specific of types of fat and the proportions to include:

- Between 8% and 10% of fat from saturated fatty acids (saturated fats are found mainly in foods that come from animals such as butter, cheese, milk, cream, and ice cream)
- Up to 10% from polyunsaturated fatty acids (polyunsaturated fat is highly unsaturated fat that is found in large amounts in foods from plants, including safflower, sunflower, corn, and soybean oils)
- Up to 15% from monounsaturated fatty acids (monounsaturated fat is a slightly unsaturated fat found in large amounts in foods from plants, including peanut, avocado, canola, and olive oils)
- Less than 300 mg per day of dietary cholesterol

This diet also specifies the level of calories that helps people achieve and maintain a healthy weight, and it is ideal for those who currently include a lot of fat in their diets and have not previously attempted to lower their cholesterol levels through dietary changes.

The AHA Step II Diet is designed for patients who require greater LDL lowering, and includes the Step I guidelines (above) with two modifications:

- Less than 7% of calories from saturated fat (instead of 8% to 10%)
- Less than 200 mg per day of dietary cholesterol (instead of less than 300 mg per day)

The Mediterranean Diet is comprised of whole grains, fresh fruits and vegetables, fish, olive oil, garlic, and moderate, daily consumption of red wine. Although this diet

is not low in fat, it is high in monounsaturated fatty acids and has been shown to increase HDL cholesterol levels and to inhibit the process whereby LDL cholesterol adheres to artery walls. Eating beef and lamb is discouraged. This diet is naturally rich in fiber, antioxidants, and omega-3 fatty acids. It contains the same amount of protein as the AHA diet, but the source of protein is primarily fish. The Mediterranean diet has less carbohydrate than the AHA or Ornish diets, but places the emphasis on consuming vegetables, nuts, legumes, and beans.

The Ornish Diet is a completely vegetarian diet that has been shown to dramatically reduce cholesterol levels and to actually reverse the risk of heart disease. No oils or animal products are allowed in the Ornish diet, except nonfat dairy products and egg whites. In this diet, total fat is limited to 10% of daily calories, saturated fats are significantly limited, and carbohydrates generally make up 75% of calories. Complex carbohydrates from whole grains and other high-fiber foods and from fresh fruits and vegetables are emphasized.

#### Weight Reduction

Being overweight increases risk of high cholesterol and heart disease. Even small degrees of weight loss can make nutritional changes more effective in lowering LDL-a 5 to 10 pound weight loss can double the reduction achieved by adjustment alone. Lowered triglycerides and increased HDL levels often accompany weight loss as well. The goal for weight loss should be a realistic one, rather than a rapid or dramatic loss. Very low calorie diets (500 to 800 calories) can be dangerous and are not recommended. A reasonable caloric restriction is considered a reduction of 250 to 500 calories per day in the usual diet aimed at achieving a gradual, weekly weight loss of one-half to one pound.

Physical Activity

Regular physical activity by itself both reduces the risk of death from heart disease and enhances the effects of diet on LDL cholesterol levels. In a study of 377 people who were divided into four groups (aerobic exercise, the AHA Step II diet, the Step II diet plus exercise, or no intervention), those who only made dietary changes did not show reduced LDL while the group on the

Step II diet plus exercise had a significant reduction in LDL cholesterol. Moderate exercise three to five times per week (the equivalent of walking 7 to 14 miles per week) can help promote weight loss in overweight individuals, reduce LDL and triglyceride levels, and produce favorable levels of HDL. Exercise may also lower blood pressure. For these reasons, everyone with risk factors for heart disease should consider starting a program of regular, aerobic physical activity, individualized to suit physical fitness level, heart health, and exercise preferences.

#### **Treatment Approach**

The main goal of treatment is to reduce the risk of cardiovascular diseases, such as heart disease and stroke, by lowering blood cholesterol levels. Studies have shown that for every 1% reduction in cholesterol levels there is a 2% reduction in the rate of heart disease. People who benefit most from lowering their cholesterol are those who already have heart disease or who have multiple risk factors for the disease. In addition lifestyle changes. to cholesterol-lowering medications are often prescribed. Changes in lifestyle are the most effective means of both preventing and, in less severe cases, treating elevated LDL cholesterol levels. The cornerstone of this treatment strategy is dietary modification and exercise. In addition to little fat and cholesterol, lean protein (such as soy and fish), and lots of fruits and vegetables, diets should include:

- Soluble fibers, such as psyllium, which have a cholesterol lowering
- Soy, which reduces total cholesterol
- which Antioxidants, when consumed in high amounts, have been associated with lowered risk of cardiovascular disease. (Vitamin E appears to be of particular value).
- Omega-3 fatty acids, such docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), which may lower the chance of recurrent heart attacks and death from heart disease.
- Folic acid supplements, which may improve the function of the blood vessels in those with high

cholesterol and reduce the risk of heart disease.

In addition, herbs and supplements may help lower cholesterol levels. The most promising include:

- Red Yeast Rice
- Fenugreek
- Guggulipid

#### Lifestyle

The following changes in life habits have been shown to both prevent high cholesterol and to lower high levels of cholesterol and triglyceride:

- Dietary changes
- Weight reduction
- Increased physical activity

#### Stress reduction

 Quitting smoking (because tobacco use lowers HDL cholesterol)

#### Medications

According to the National Cholesterol Education Program (NCEP) guidelines, healthcare practitioners should prescribe cholesterol-lowering medication when:

- LDL cholesterol is higher than 190 mg/dL and the person has no known risk factors for heart disease
- LDL cholesterol is higher than 160 mg/dL and the person has two or more risk factors for heart disease
- LDL cholesterol exceeds 130 mg/dL and the person has heart disease

The following are commonly prescribed medications for high cholesterol:

Statin drugs HMG-CoA reductase inhibitors (lovastatin, pravastatin, simvastatin. atorvastatin, and fluvastatin). This class of medications is used to treat elevated LDL and triglyceride levels, and also to raise HDL levels. Taking statins reduces the risk of death in those with heart disease and slows the rate of development of both heart disease and stroke when used by those with high cholesterol. Healthcare practitioners prefer statin drugs because they are effective most cholesterollowering medication. Side effects include myositis (inflammation of the muscles), joint pain, stomach upset, and liver damage.

- Niacin (nicotinic acid). This is used elevated LDL treat triglyceride levels and is more effective in increasing HDL levels other cholesterol-lowering medications. effects may Side include redness or flushing of the skin (which can be reduced by taking aspirin 30 minutes before the niacin), stomach upset (which usually subsides in a few weeks), headache, dizziness, blurred vision, and liver damage. Starting with low doses of niacin and increasing very gradually helps to reduce the likelihood and severity of side effects. People who have gout, diabetes, low blood pressure, or a history of peptic ulcer should avoid niacin.
- Bile acid sequestrants colestipol, (cholestyramine, colesevelam). These are used to treat elevated LDL levels. Common bloating. effects include side heartburn. and constipation, These triglycerides. elevated medications may also lead to a deficiency of fat-soluble vitamins and loss of calcium in the urine.
- Fibric acid derivatives (gemfibrozil, fenofibrate, and clofibrate). These used are medications elevated triglycerides and low HDL cannot tolerate people who include effects niacin. Side upset, stomach myositis, irregular gallstones, sensitivity, heartbeat, and liver damage.
- Probuchol lowers both LDL and HDL. Its use is therefore generally limited to certain types of hereditary high cholesterol and/or to cases in which other cholesterol-lowering medications have been ineffective. Side effects include diarrhea, bloating, nausea, and dizziness.

Nutrition and Dietary Supplements
There is considerable evidence that dietary antioxidants, particularly vitamin E, as well as folic acid, fiber, and soy can help to prevent the development of heart disease.

# Fiber and Fiber Sources

The American Heart Association (AHA) recommends increased intake of dietary fiber in the form of whole grains, vegetables, fruits, legumes, and nuts because they have been shown to do the following:

- Reduce total and LDL cholesterol more effectively than a diet low in saturated fat and cholesterol alone
- Help control weight and intake of calories by promoting a sense of fullness
- Improve cholesterol and triglyceride levels as well as blood sugar in people with diabetes

Soluble fibers such as those in psyllium husk, guar gum, and oat bran have a cholesterol-lowering effect when added to a low-fat, cholesterol-lowering diet. Studies have shown psyllium, in particular, to be quite effective in lowering total as well as LDL cholesterol levels. Oat bran (3 g per day) has also been shown to lower total cholesterol.

#### Bezafibrate

Fibric acid derivatives used in addition to diet and exercise for the treatment of hypercholestraemia characterized by high cholesterol, useful in reducing triglycerides and delay the onset of type 2 diabetes.

#### Soy

Many studies have shown that replacing some animal protein with soy protein in the diet results in lower blood cholesterol levels, especially when soy is consumed as part of a general low-fat diet. As little as 20 g of soy protein per day is effective in reducing total cholesterol, but that 40 to 50 g shows faster effects (in 3 weeks instead of 6). Ethanol-washed soy preparations should be avoided because this procedure causes the soy to lose its isoflavones (the substances likely responsible for its cholesterol-lowering effects) in the process.

# Omega-3 fatty Acids EPA and DHA

The benefits of consuming fish oils, rich in the omega-3 fatty acids docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), at doses ranging from 850 mg to 4 g per day for those with heart disease. Supplementation with DHA has been shown

to reduce triglycerides and LDL levels and raise HDL levels.

#### Alpha-Linolenic Acid

Walnuts are one of the best sources of the omega-3 fatty acid alpha-linolenic acid. Replacing a major portion (35%) of the monounsaturated fat in the Mediterranean diet with walnuts appears to significantly improve cholesterol and triglyceride levels in people with high cholesterol.

#### Vitamin E

It has reported beneficial results from the use of vitamin E supplements for the treatment and prevention of heart disease including for those with elevated cholesterol levels.

#### Vitamin C

Vitamin C (3 glasses of orange juice per day or up to 3 g per day as a supplement) may help decrease total and LDL cholesterol and triglycerides, and increase HDL levels.

#### Coenzyme Q10 (CoQ10)

Coenzyme Q10 (CoQ10), also known as ubiquinone, is an antioxidant that essential for energy production. Levels of CoO10 have been found to be lower in people with high cholesterol when they were compared to healthy individuals of the same age. Furthermore, when person with high cholesterol take statin drugs, CoQ10 levels appear to decline in direct proportion to the level of decrease in cholesterol. This is particularly important to bear this in mind when statin drugs are used for long periods time. Taking CoQ10 supplements, however, can correct the deficiency caused by statin medications without affecting the medication's positive effects on cholesterol levels.

#### Folic Acid (Vitamin B9)

High blood levels of homocysteine have been shown to increase the risk of heart attacks. Evidence suggests that high homocysteine levels are also related to low folate levels. This means that an adequate supply of folate and other B vitamins may be important, particularly for those with heart disease.

#### **Plant Sterols**

Plant sterols (fats present in fruits, vegetables, seeds, and nuts) appear to interfere with the absorption of cholesterol, thereby lowering the level of cholesterol in the blood. A daily intake of 1.6 g of margarine containing plant sterols has been

shown to reduce total and LDL cholesterol. with larger intakes not necessarily providing any additional benefit. However, regarding the possibility that plant sterols interfere with the absorption of certain antioxidants such as alpha- and beta-carotenes, alphatocopherol, and lycopene.

#### L-Carnitine

L-carnitine is produced in the liver and kidneys from the amino acids lysine and methionine. It is stored in skeletal muscles and the heart and may be beneficial in treating conditions such as chest pain, heart attack, heart failure, diabetes, and abnormal cholesterol. Supplementation with 2 to 3 g per day of L-carnitine led to a significant reduction in total cholesterol triglycerides, and to increases in HDL cholesterol levels.

#### Red wine

Red wine contains flavonoids, which inhibit LDL oxidation. Studies have demonstrated a relationship between flavonoid consumption (from food) and reduced risk of death from coronary heart disease. Although nonalcoholic grape products contain flavonoids, red wine contains much higher concentrations of flavonoids. However, the use of alcohol is not advocated by the AHA and other organizations because of the potential for addiction and the other serious repercussions such as motor accidents and the development hypertension, liver disease, breast cancer, weight gain. If red wine is consumed, it is recommended that men have no more than 2 glasses (20 g ethanol) per day and women. no more than 1 glass (15 g ethanol).

#### **Red Yeast Rice**

Red yeast rice, the fermented product of rice and red yeast, has been used in China since at least 800 AD to make wine and preserve food, and for its medicinal properties, which are believed to include, among other things, improvement in blood circulation. Recent well-designed studies have shown that red significantly rice yeast reduces LDL cholesterol, cholesterol, triglyceride concentrations.

#### Chromium

Brewer's yeast is an important source of chromium. Ninety percent of Americans are deficient this important in mineral. Chromium has demonstrated the ability to lower LDL levels in the blood and raise

#### Calcium

Calcium supplements, in the range of 1,500 to 2,000 mg per day, may help to lower cholesterol. The information available thus far suggests that keeping cholesterol levels normal or even low by using calcium supplements is likely to be more beneficial.

# Vitamin B5 (Pantothenic Acid)

Vitamin B5 lowers cholesterol. Studies are currently underway to determine if this vitamin helps prevent heart disease.

#### Herbs

# Hawthorn (Crataegus oxyacantha and monogyna)

The flowers and berries of the hawthorn plant have been used in traditional herbal and homeopathic remedies to protect against stroke and to treat chest pain, irregular heartbeat, and heart failure. In addition, studies using rats suggest that the tincture of Crataegus (made from the berries) may be a powerful agent for the removal of LDL from the blood stream. The tincture of hawthorn berries reduced also production of cholesterol in the liver of rats who were being fed a high-cholesterol diet.

#### Green Tea (Camellia sinensis)

Green tea has been observed to have a variety of beneficial effects, including anticancer and antioxidant effects. The tea has also demonstrated an ability to lower total cholesterol and raise HDL cholesterol in both animals and people. The catechins in green tea may block intestinal absorption of cholesterol and promote its excretion from the body.

#### Garlic (Allium sativum)

Long hailed for its beneficial effects, a number of studies have found that garlic reduces elevated total cholesterol levels more effectively.

#### Red clover (Trifolium pratense)

known Chemicals in red clover isoflavones may raise HDL especially in menopausal women. Not all studies, however, have shown such positive effects.

#### Bilberry (Vaccinium myrtillus)

Animal studies suggest that bilberry may prevent the oxidation of LDL cholesterol, thereby lessening the risk of this bad form contributing of cholesterol

development of atherosclerotic plaque in the arteries.

# Black beans (Phaseolus vulgaris)

It is an amlase inhibitor that inhibits digestion of starch and absorption of glucose. It can be effectively used in all obese patients to reduce and control excess fat and thus lowering the risk of heart, liver. gall bladder diseases, diabetes, arthritis. breathing disorder, problem with conception etc and other problems associated with obesity.

#### Massage and Physical Therapy

While no studies have examined the effect of massage on cholesterol levels, massage has been shown to reduce cortisol (stressrelated hormone) levels and to induce relaxation. Massage may therefore have an indirect effect on risk factors that result from or are worsened by stress, such as poor eating habits and obesity, cigarette smoking, or lack of exercise. Lowering cortisol levels may also have a positive effect on cholesterol levels.

#### Mind/Body Medicine Stress Reduction

Emotional and social stress increases the risk for heart disease. Stress is thought to promote hardening of the arteries and effective stress reduction techniques can help to reduce high cholesterol levels and other risk factors. In several studies of Transcendental Meditation (TM), significant reductions in total cholesterol levels as well as reductions in blood pressure, obesity, and cigarette smoking were seen after 3 to 11 months of practice. Although TM appears to be one of the more effective methods for relaxation, other methods that may be considered include:

- Progressive muscle relaxation (PMR)
- Biofeedback
- Yoga
- Stress management classes

# Ayurveda/Siddha

# Guggulipid (Commiphora mukul)

Guggulipid, a traditional medication used to treat high cholesterol, is Ayurvedic widely used in India recommended as a treatment for hardening and was of the arteries in 600 BC. It appears to be an effective cholesterol-lowering agent and its

healthful effects are thought to be due to its ability to block the production of cholesterol in the liver. The guggulipid 400mg three times had reductions of total cholesterol. LDL, and triglycerides.

#### Fenugreek (Trigonella foenum graecum)

Fenugreek is a legume sold as a dried seed. It is cultivated in India and the Middle East and used as a condiment in foods like curry and in baked goods. In Ayurvedic medicine, spices and herbs are traditionally used to treat a variety of chronic diseases, Fenugreek seeds have been shown to decrease LDL cholesterol and triglycerides, and increase HDL cholesterol levels. These effects appear to result from reduced intestinal absorption of cholesterol, and may be related to the high fiber content of the seed. Consumption of fenugreek may therefore be beneficial in the management of high cholesterol levels.

#### Other Considerations Pregnancy

Cholesterol-lowering medications should be avoided during pregnancy.

#### **Prognosis and Complications**

A number of complications may occur if high cholesterol is left untreated. These include:

- Heart disease—the leading cause of and elevated cholesterol death levels more than doubles the risk of heart attack. Lowering cholesterol by 1% reduces the risk of coronary artery disease by 2%.
- Stroke-low levels of HDL cholesterol have been associated with an increased risk of stroke
- Insulin resistance—88% of people with low HDL and 84% with high triglycerides also have insulin resistance. Many people insulin resistance go on to develop diabetes.

It is also important to note that lowering cholesterol too rapidly may contribute to the development of depression, which may be related to low levels of omega-3 fatty acids. Maintaining an appropriate weight, eating a low-fat diet, and exercising can have a significant impact on cholesterol levels and improve long-term prognosis.

Hyperkalemia is an excess of serum potassium. Most potassium in the body (98%) is found within cells; only a small amount usually circulates bloodstream. The balance of potassium between the cells and the blood is critical to the body. It affects the way the cell membranes work and governs the action of the heart and the pathways between the brain and the muscles. However, the levels can get too high if kidneys aren't working right, which is the most common cause of hyperkalemia. Another cause is damaged cells' releasing potassium into the bloodstream faster than even normal kidneys can clear it. Medications or diet may also affect the amount of potassium in blood. Hyperkalemia is a serious condition that must be treated promptly.

#### Signs and Symptoms

- Fatigue
- Weakness
- Tingling, numbness, or other unusual sensations
- Paralysis
- Palpitations
- · Difficulty breathing

#### What Causes It?

- Kidney problems
- Too much acid in the blood, as sometimes seen in diabetes
- Diet high in potassium (bananas, oranges, tomatoes, high protein diets, salt substitutes, potassium supplements)
- Trauma, especially crush injuries or burns
- Addison's disease
- Certain medications

#### What to be done

Discover it during a routine blood test or electrocardiogram. Hyperkalemia can cause life-threatening effects without warning. If the medications are not successful in lowering the potassium level in blood, dialysis may be recommended.

#### **Treatment Options**

The medications that treat hyperkalemia are meant to stabilize cardiac function, promote the movement of potassium from the bloodstream back into the cells, and encourage the excretion of excess

#### **Drug Therapies**

- Insulin—promotes potassium shift from blood to cells
- Sodium bicarbonate—promotes potassium shift from blood to cells
- Beta agonists—promote potassium shift from blood to cells
- Diuretics—cause potassium excretion from kidneys
- Binding resins—promote potassium/sodium exchange in the gastrointestinal system

#### Complementary and Alternative Therapies Nutrition

- Avoid alcohol, caffeine, refined foods, sugar, and saturated fats (meat proteins and dairy products).
   Eliminate high-potassium foods.
- Drink more water; dehydration can make hyperkalemia worse.
- Eat small amounts of protein and more vegetable proteins and fish than chicken and red meats.
- Small, frequent meals can help prevent hypoglycemia.
- Magnesium (200 mg two to three times per day) helps regulate potassium levels.

#### Herbs

- Hawthorn (Crataegus monogyna) increases cardiac output without increasing cardiac load. It dilates helps stabilize blood vessels. also arrhythmias, and cardiac function. liver supports Compromised liver function and make can fat digestion hyperkalemia worse. Drink 3 to 4 cups of tea per day.
- Lily of the valley (Convalleria majalis) increases cardiac output and has a regulating effect on heart rhythm. It is a diuretic that relieves swelling and has a neutral to slightly lowering effect on sodium and potassium. This herb has toxic side effects and should not be used

without supervision from your physician.

Homeopathy

Homeopathy may be useful as a supportive therapy.

Physical Medicine

Contrast hydrotherapy. Alternating hot and cold applications brings nutrients to the site and eases inflammation. Use the applications over the kidneys. Alternate three minutes hot with one-minute cold. Repeat three times to complete one set. Do two to three sets per day.

Acupuncture

Acupuncture may be helpful in supporting normal kidney function.

#### Massage

Swedish massage may help to stimulate the kidneys.

#### Follow up

Ask to see two or three days after discharged from the hospital, to repeat the potassium tests and electrocardiogram, and check kidney function.

#### Special Considerations

If on regular dialysis, make sure keep strictly to schedule to avoid hyperkalemia and other serious problems.

#### 75. Hyperparathyroidism

There are four parathyroid glands, located behind the two lobes of the thyroid gland. The parathyroid glands produce the hormone that regulates blood levels of calcium and phosphate, minerals necessary for strong bones and teeth. Primary hyperparathyroidism is characterized by an overproduction of parathyroid hormone, which, in turn, results in an elevation of calcium levels in the blood.

Signs and Symptoms

They are generally attributable to persistently high levels of calcium and may include:

- Joint pain
- Bone loss leading to osteoporosis
- Muscle weakness
- Abdominal discomfort
- Heartburn
- Nausea and vomiting
- Constipation
- Lack of appetite
- Ulcers
- Pancreatitis (inflammation of the pancreas)
- Kidney stones
- Excessive thirst
- Excessive urination
- Depression
- Anxiety
- Memory loss
- What Causes It?
  - Single or multiple benign tumors in the parathyroid glands

- Parathyroid hyperplasia (excessive growth of normal parathyroid cells)
- Parathyroid malignancies (rare)
- Certain endocrine disorders, such as Type I and II multiple endocrine neoplasia (MEN) syndromes

#### Who's Most At Risk?

- Age: incidence increases with age (but the disease can also affect children)
- Gender: affects twice as many women as men
- Genetic endocrine problems (MEN syndromes)

#### What to be done

The diagnosis of primary hyperparathyroidism is made mostly on the basis of lab tests that show high levels of calcium and parathyroid hormone. About half the time, physicians discover primary hyperparathyroidism inadvertently from a blood test drawn for other reasons. Ask about symptoms of abdominal pain and constipation, depression, anxiety, memory muscle weakness, and problems. Urine is often collected to check for excess calcium. Imaging may be done to assess any bone loss. An ultrasound of the neck may be performed to determine if the parathyroid glands are enlarged. computed tomography (CT) or magnetic resonance imaging (MRI) may be used to check for a tumor.

#### **Treatment Options** Prevention

There are no known preventive measures for primary hyperparathyroidism; however, it may be prudent for people who are at risk to avoid dehydration.

#### **Treatment Plan**

Surgery to remove one or more of the parathyroid glands is very successful in treating primary hyperparathyroidism. In rare cases, if a patient does not show any signs or symptoms of the disease and has only mildly elevated calcium levels, the medical specialist may be willing to wait, observe carefully over time, and consider the nonsurgical approach of medications to prevent or treat complications and/or a further rise in calcium levels.

#### **Drug Therapies**

- A specific class of diuretics, along with intravenous hydration, is used in the acute phase to lower levels of calcium in the blood while the person is awaiting surgery.
- Calcitonin may be used in injectable form.
- Estrogen may preserve bone mass reduce calcium levels postmenopausal women who are not able to undergo surgery.
- Bisphosphonates, such tiludronate and alendronate, may be used after surgery.

#### Surgical and Other Procedures

Parathyroidectomy involves removal of one or more parathyroid glands.

#### Complementary and Alternative **Therapies** Nutrition

Ipriflavone is an isoflavone, or estrogen-like compound from plants, found mainly in soy and also available in supplement Several scientific studies have investigated the effect of ipriflavone on patients with osteoporosis. Some studies suggest that ipriflavone may stop bone loss and help new bone form. Because hyperparathyroidism may lead to osteoporosis, the question has been raised about the possible use of ipriflavone to treat this cause of bone loss. Ipriflavone helped reduce loss of bone but did not stimulate formation of new

with primary person hyperparathyroidism who also borderline nutritional status develop deficiencies in the following substances that are necessary for normal bone formation.

- Vitamin C
- Vitamin K
- 0 Manganese

#### Herbs

- Black cohosh (Cimicifuga racemosa) is reported to have estrogen-like effects and enhance estrogen's role in the body, such as reducing the breakdown of bone; more research is needed to determine the value of this use.
- Ginkgo biloba extract contains substances similar to isoflavone in raising soy, the theoretical possibility that this herb may also some degree of bone protection; studies regarding this potential use have not conducted to date.
- Horsetail (Equisetum arvense) is rich in minerals and has been used in traditional remedies to support normal bone integrity.
- Oat straw (Avena sativa) is rich in minerals and has been used in support traditional remedies to normal bone integrity.

#### Homeopathy

- (calcium Calcarea carbonica carbonate)
- phosphorica (calcium Calcarea phosphate)

## **Prognosis/Possible Complications**

The prognosis is excellent for persons with primary hyperparathyroidism who have no symptoms, as well as those who have surgery to remove one or more parathyroid Possible complications skeletal damage, urinary tract infections, kidney damage or kidney stones, peptic ulcers, inflammation of the pancreas, high blood pressure, nervous system disorders. and rare complications from surgery.

#### Follow up

People who have had surgery will have their blood calcium levels monitored for several months afterward to be sure that the levels remain stable. The physician will check blood calcium levels for a longer period of time if a person does not have surgery. In

this case, the person will have regular checkups that will include a careful assessment of the bones and kidneys.

## 76. Hypertension; High Blood Pressure

Hypertension, or high blood pressure, is a serious condition. It is defined as an average systolic blood pressure above 140 mm Hg, a diastolic blood pressure above 90 mm Hg, or both. High blood pressure increases the risk of heart disease and stroke, the first and third most common causes of death. In the early and middle adult years, men are more likely than women to develop the condition, but as men and women age, the reverse is true; more women older than the age of 55 have high blood pressure than men of the same age. While hypertension generally develops in people older than 20 years of age.

Signs and Symptoms

Most people who have high blood pressure do not know they have it because they generally experience no symptoms at all. Occasionally, some individuals experience a mild headache when their blood pressure is high. Serious cases of hypertension, which happen infrequently, may produce the following symptoms:

- Severe headache
- 0 Confusion
- Nausea
- Visual disturbances
- Seizure

#### Causes

There are two major types of hypertension: essential (primary) and secondary. Essential hypertension is by far the most common, accounting for more than 95% of all cases. The cause of this form of hypertension is not known for certain, but is likely a combination of factors, including:

- Genes for high blood pressure
- Low levels of nitric oxide, an agent responsible for the dilation of blood vessels
- Insulin resistance
- Obesity

The causes of secondary hypertension

Kidney disorders

- Endocrine disorders. such Cushing's syndrome
- Obstructive sleep apnea
- Stress .
- Chronic heavy alcohol consumption
- Long-term use of nonsteroidal antiinflammatory drugs (NSAIDs), particularly in the elderly
- Use of certain medications. including oral contraceptives, pseudoephedrine, hormone replacement therapy, and steroids
- Heavy coffee drinking (5 or more cups per day), particularly in those who have previously had high blood pressure
- Use of cocaine, nicotine, or licorice (Glycyrrhiza glabra) can cause or worsen existing hypertension

#### Risk Factors

following factors increase The individual's risk for high blood pressure:

- Family history of hypertension
- Alcohol abuse
- High sodium intake
- Inactive lifestyle
- Being overweight
- Mood disorders, particularly depression and anxiety (they may have a direct impact on blood or they may lead vessels unhealthy behaviors such as alcohol and substance abuse or poor weight management)

#### Diagnosis

A person with hypertension has an average systolic blood pressure above 140 mm Hg and/or a diastolic blood pressure above 90 mm Hg. To diagnose hypertension, a physician will obtain a blood pressure measurement during a routine physical examination. If blood pressure is elevated, the physician will check the pulse rate, examine the neck for swollen veins or an enlarged thyroid gland, listen to the heart for murmurs, feel the abdomen, and examine the eyes for damaged blood vessels in the retina. If the physician suspects hypertension, additional laboratory and blood tests will help determine if it is secondary hypertension or essential hypertension.

#### **Preventive Care**

Studies suggest that the following lifestyle factors can help prevent hypertension:

#### Maintaining a desirable weight

According to several large-scale, population-based studies, being overweight is one of the strongest predictors of development of high blood pressure. including in adolescents and young adults. Similarly, maintaining a normal weight is one of the most effective ways to prevent high blood pressure. Weight reduction, therefore, in overweight individuals of any age should be a priority in the prevention of hypertension.

#### Reducing salt intake

Although population-based studies suggest a link between salt intake and prevalence of high blood pressure in particular groups of people, how each individual responds to sodium in his or her diet is quite variable. Since reducing dietary salt is generally considered safe, however, low-salt diets are recommended, particularly for those at risk for developing hypertension or heart disease.

#### Increasing physical activity

Several studies suggest that physically inactive people may be at an increased risk for developing hypertension. According to some population-based studies, men who lead physically active lives can reduce their risk of developing hypertension by 35% to 70%. Although the duration and frequency of exercise necessary to prevent or treat hypertension is not well established, some evidence suggests that low to moderate intensity exercise may be more effective than higher intensity exercise training.

#### Limiting alcohol consumption

Studies suggest that people who consume three or more alcoholic beverages per day increase their risk for developing hypertension. If an individual is going to drink alcohol, therefore, intake should be limited to no more than two drinks per day. Eating a diet rich in fruits and vegetables
People who consume vegetarian diets have
significantly lower blood pressure than
those who do not. The specific nutrients
responsible for lowered blood pressure
remain largely unknown, however.

#### **Treatment Approach**

The goal in treating hypertension is to reduce the risk of serious complications, including heart disease and stroke. While the optimum blood pressure is 120/80 mm Hg, even partial reduction in blood pressure is beneficial. Prescription medications are often needed to treat hypertension, but modifications, including diet, lifestyle exercise, and relaxation, are necessary with without medications. Examples of relaxation techniques include biofeedback, massage, meditation and qi gong. Often, in the early stages of hypertension when blood pressure elevation is mild, the doctor will recommend lifestyle modifications alone for a period of 6 to 12 months. After this time, if blood pressure is still high, medication will likely be prescribed.

#### Lifestyle

The following steps are recommended for people with hypertension, regardless of whether they are taking prescription medications.

- Lose weight if overweight.
- Limit alcohol intake to no more than 1 oz of ethanol per day for men (this roughly equals 2 pints of beer, 2 glasses of wine, or 2 shots of 100-proof whiskey) and 0.5 oz for women and lighter-weight individuals.
- Increase and maintain aerobic physical activity (30 to 40 minutes most days per week).
- Reduce salt intake too less than 2,400 mg sodium or 6,000 mg sodium chloride per day.
- Maintain adequate intake of calcium (1,000 to 1,500 mg per day) and potassium (approximately 2,000 mg per day) for optimum health.
- Improve overall cardiovascular health by quitting smoking and reducing saturated fat cholesterol intake.
- Reduce stress—since ongoing stressful circumstances, such as job

dissatisfaction, may contribute to the development of hypertension, stress management may lower elevated blood pressure.

## Medications

Medication is recommended for people with sustained systolic pressure above 160 mm Hg or diastolic pressure above 100 mm Hg. There are several medications available to treat hypertension, and the medications prescribed depend on each individual case. 10% of patients may require as many as three drugs to control their condition.

#### Diuretics

Diuretics help the kidneys eliminate sodium and water from the body. This decreases the volume of blood in the body and lowers blood pressure. There are three types of diuretics: thiazide, loop, and potassium sparing. The effects of these and other types of medications used to treat hypertension follow.

- Thiazide diuretics (such as hydrochlorothiazide)—tend to deplete potassium and may increase cholesterol and blood sugar; should not be used by people with gout or diabetes
- Loop diuretics (such as furosemide and bumetanide)—also tend to lower potassium levels
- Potassium-sparing diuretics (such as spironolactone)—this class does not lower potassium, but side effects may include excessive breast development in men

Other medications used to treat hypertension include:

- Beta-blockers (such as acebutolol, atenolol, metoprolol, nadolol, and propranolol)—slow the heart rate down and diminish stress hormones in the body; side effects may include depression, insomnia, fatigue, and sexual dysfunction; these medications should not be used in the case of heart failure and airway diseases such as emphysema; they should also be avoided by people with diabetes
- Angiotensin-converting enzyme (ACE) inhibitors (such as benazepril, captopril, enalapril, lisinopril, and ramipril)—by

inhibiting a chemical reaction in the body, these drugs decrease production of a substance in the body that, in susceptible individuals, increases blood pressure; side effects may include cough, rash, and loss of taste

- Calcium-channel blockers (such as amlodipine, felodipine, nifedipine, nicardipine, and verapamil)—relax blood vessels, thereby lowering blood pressure; side effects may include constipation, nausea, and headache
- Angiotensin II receptor blockers (such as losartan, valsartan, candesartan, irbesartan, and telmisartan)—block the effects of a particular chemical in the body, thereby preventing it from increasing blood pressure; side effects may include dizziness, nausea, diarrhea, back pain, cough, fatigue, fever, shortness of breath, depression, and anxiety

## **Nutrition and Dietary Supplements**

A landmark study known as the Dietary Approaches to Stop Hypertension (DASH) trial determined that eating a balanced, healthful diet that is rich in fruits, vegetables, and low-fat dairy products is very important for prevention and reduction of high blood pressure. For some, when this diet is combined with low salt intake (less than 2,400 mg per day) the improvement in blood pressure may be as effective as taking a medication. Specific nutrients and supplements that have been studied for hypertension include the following.

#### **Antioxidants**

Eating several servings of fruits and vegetables each day can ensure optimal intake of antioxidants such as vitamin C, vitamin E, and beta-carotene, which may protect against the development of hypertension.

#### Calcium

The DASH study mentioned above also compared a diet rich in fruits and vegetables to a diet rich in fruits and vegetables as well as low-fat dairy products. Calcium in these low-fat dairy products is responsible for the improvement; however, given that dairy products also contain other nutrients such as modest amounts of potassium and

magnesium, that conclusion is not entirely clear. Calcium as a supplemental treatment for high blood pressure have not been conclusive; in other words, it remains to be seen whether taking supplements of calcium will have the same effect on blood pressure as low-fat dairy products in the diet.

## Coenzyme Q10

CoQ10 (a substance found in oily fish, organ meats such as liver, and whole grains) may significantly lower blood pressure.

#### Magnesium

Dietary magnesium may be associated with lowered blood pressure, but most studies have failed to establish a link between magnesium supplementation and lowered blood pressure. Foods rich in magnesium include legumes, nuts, whole grains, and leafy green vegetables.

## **Omega-3 Fatty Acids**

Recent studies indicate that supplementation with omega-3 polyunsaturated fatty acid (PUFA), a substance found primarily in fatty cold-water fish, such as salmon, mackerel, sardines, and herring, may significantly lower blood pressure in people hypertension. Available supplements include eicosapentaenoic acid (EPA), docosahexaenoic acid flaxseed, flaxseed oil, and fish oil capsules. Fish high in mercury (such as tuna) should be avoided because this may increase blood pressure.

#### Potassium

Some studies have linked low dietary potassium intake with hypertension. A diet high in potassium from fruits and vegetables, such as potatoes, avocados, bananas, oranges, prunes, and cantaloupe, is generally recommended.

#### Vanadium

Vanadyl sulfate may help improve blood pressure. This has yet to be tested on people.

#### Herbs

#### Garlic (Allium sativum)

garlic may have beneficial cardiovascular effects, including lowered blood pressure. Since garlic is relatively safe and has a number of other healthful benefits. An herbalist may recommend 5 to 10 minced raw garlic cloves per day or 300 mg of dried garlic extract three times per day for those at risk for heart disease. products also contain other netricitis such as

# Hawthorn (Crataegus monogyna)

People with hypertension who are taking blood pressure medications safely. An herbalist hawthorn recommend between 160 and 900 mg of hawthorn leaf and flower extract per day for six weeks or more. Other preliminary studies have revealed beneficial effects for the following herbs:

- Ginkgo (Ginkgo biloba)
- Red Korean ginseng ginseng)

#### Acupuncture

Several studies involving small numbers of people with hypertension showed a reduction in blood pressure with the use of acupuncture. While these clinical trials were conducted over a short period of time, the encouraging results suggest that it would be worthwhile for scientists to conduct longerterm research of acupuncture for treating high blood pressure.

#### Chiropractic

Preliminary evidence suggests that people with high blood pressure who receive chiropractic spinal manipulation experience a significant reduction in blood pressure,

## Massage and Physical Therapy

Massage may be particularly helpful for people with hypertension brought on by stress. This is because the beneficial effects of massage are due at least in part to a reduction in stress. One recent study revealed that people with hypertension who significant receive massage showed reductions in blood pressure and steroid hormones, an indicator of stress. Studies are needed to evaluate the long-term safety and effectiveness of massage, people with hypertension who tend to have high levels of stress in their lives may benefit from massage therapy. In addition, massage tends to help people stick with healthy behaviors such as eating healthfully and not smoking.

#### Mind/Body Medicine

Although the association between ongoing life stress and hypertension is complex and somewhat controversial, many believe that relaxation techniques may be helpful in alleviating feelings of stress, which is often a contributing factor to hypertension. While the results of studies investigating this relationship have been mixed, one study of older African Americans living in an urban setting found that those who participated in

transcendental meditation (TM) or progressive muscle relaxation (PMR) program had a significant reduction in blood pressure compared to those who participated in a lifestyle education program. While both techniques were beneficial, TM was twice as effective as PMR. In addition to TM and PMR, other mind/body techniques such as self-hypnosis and biofeedback have shown results recent studies. promising in Biofeedback in particular may reduce elevated blood pressure from stress and help individuals achieve healthful modifications, such as stopping smoking and losing weight.

Avurveda/Siddha

Snakeroot (Rauwolfia serpentina)

Reserpine has been all but replaced by newer, better-tolerated medications. People stomach ulcers. depression, ulcerative colitis should avoid snakeroot. Side effects are similar to prescription reserpine and include drowsiness and an inability to concentrate. This combination herbal remedy has been shown significantly reduce diastolic blood pressure in people with hypertension. It contains the following herbs:

- Arjun (Terminalia arjun)
- Ashwagandha or winter cherry (Withania somnifera)
- Guguchi (Tinospora cordifolia)
- Indian gooseberry (Emblica officinalis)
- Hundred husbands (Asparagus racemosus)
- Gotu kola (Centella asiatica)
- Muskroot (Nardostachys jatamansi)
- Saffron (Crocus sativus)
- Myrobalan (Terminala chebula)
- Licorice (Glycyrrhiza glabra) note that when used alone, this herb may cause high blood pressure

Traditional Chinese Medicine

The traditional Chinese practice of qi gong, which combines meditation, pulsing or animal-like movements, breathing exercises, spiritual practices, and self-massage, may be a useful addition to lifestyle modifications and medication in treating hypertension,

particularly in the elderly. The following herbs have also been used in Traditional Chinese Medicine to lower blood pressure.

- King of bitters (Andrographis paniculata)
- Linustrum (Lingusticum wallichii)

**Other Considerations Pregnancy** 

Blood pressure is monitored frequently during pregnancy because some women may develop high blood pressure for the first time while pregnant. If this occurs, medication may be needed. In addition, a condition known as preeclampsia is very serious and even life threatening. Preeclampsia is high blood pressure during pregnancy that occurs along with other symptoms and signs, such as swelling of the ankles and legs, blurred vision, liver test abnormalities, and protein in the urine.

**Warnings and Precautions** 

- Avoid fish high in mercury, which may increase blood pressure.
- The use of cocaine, nicotine, or licorice (*Glycyrrhiza glabra*) can cause or worsen existing hypertension.
  - Caffeine can exacerbate high blood pressure.

**Prognosis and Complications** 

If left untreated, hypertension can cause several serious complications, including:

- Stroke
- Coronary artery disease and heart attack
- Congestive heart failure
- Kidney disorder
- Disorders of the retina, which can ultimately lead to blindness
  - Impotence in men and decreased orgasm in women
- Memory impairment and dementia
   Fortunately, there are several treatment options for hypertension. Comprehensive treatment, including lifestyle modifications and blood pressure medications, usually results in much lower risk for complications and a generally good prognosis.

# 77. Hyperthyroidism

Hyperthyroidism occurs when your thyroid gland, located at the front of your neck, produces too much thyroid hormone. Hyperthyroidism has three forms that share several symptoms. Hyperthyroidism usually happens between the ages of 20 and 40. It often starts after times of extreme stress or during pregnancy.

#### Signs and Symptoms

- Fast heart rate and palpitations
- High blood pressure
- Swelling at the base of the neck
- Moist skin and increased perspiration
- Shakiness and tremor
- Nervousness and confusion
- Increased appetite accompanied by weight loss
- Difficulty sleeping
- Swollen, reddened, and bulging eyes
- Constant stare (infrequent blinking, lid lag)
- Sensitivity of eyes to light
- Occasionally, raised, thickened skin over the shins, back of feet, back, hands, or face
- In crisis: fever, very rapid pulse, agitation, and possibly delirium
- Changes in menstrual periods

#### What Causes It?

Researchers suspect that Graves' disease (one form of hyperthyroidism) stems from an antibody that mistakenly stimulates the thyroid to produce too much hormone. Toxic nodular goiter is caused by a noncancerous tumor in nodules that make up the thyroid gland. Secondary hyperthyroidism results when a gland called the pituitary overrides the thyroid's normal instructions, and orders it to make too much thyroid hormone.

#### What to be done

Ask to extend fingers to see if they have a telltale tremor. Examine thyroid gland while swallow, blood drawn and may need X rays.

# Treatment Options Drug Therapies

Prescribe a single dose of liquid radioactive iodine, which calms down your thyroid gland. Alternatively, provider may give thyroid-depressive medication. You may also be prescribed beta-blockers. If drug treatment fails, may need surgery to remove part of thyroid.

# Complementary and Alternative Therapies

Alternative therapies may be effective at minimizing symptoms of mild thyroid dysfunction.

#### Nutrition

Foods that depress the thyroid include broccoli, cabbage, Brussels sprouts, cauliflower, kale, spinach, turnips, soy, beans, and mustard greens. Avoid refined foods, dairy products, wheat, caffeine, and alcohol.

- Omega-3 fatty acids are antiinflammatory and help immune system function.
- Bromelain (250 to 500 mg three times per day between meals) reduces swelling.
- Vitamin C (250 to 500 mg twice a day) supports immune function and decreases inflammation.
- Calcium (1,000 mg per day) and magnesium (200 to 600 mg per day) are cofactors for many metabolic processes.
- Vitamin E (400 IU twice a day) can help protect the heart.
- Coenzyme Q10 (50 mg twice a day) can help protect the heart.

#### Herbs

Bugleweed (Lycopus virginica) and lemon balm (Melissa officinalis) help to normalize the overactive (Leonurus thyroid. Motherwort heart relieve cardiaca) may passionflower palpitations and reduces incarnata) (Passiflora anxiety. Combine two parts of bugleweed with one part each of motherwort, lemon balm,

passionflower and take in tincture form, 30 to 60 drops three to four times per day.

- Quercetin (250 to 500 mg three times per day) is an antiinflammatory.
- Turmeric (Curcuma longa) makes the effects of bromelain stronger and should be taken between meals, 500 mg three times per day.
- Milk thistle (Silibum marianum) helps the liver provide proper binding proteins, 300 to 600 mg three times a day.
- Hawthorn berry (*Crataegus laevigata*) helps protect the heart. Take ½ tsp. of the solid extract, or 1,000 mg of the herb, three times a day.
- Lemon balm inhibits the binding of thyroid-stimulating hormones (TSH) receptors.
- Immune-suppressing herbs such as Stephania root (Stephania tetranda) and Indian sarsaprilla (Hemidesmus indicus) help break the circle of cellular damage.

• Anti-inflammatory herbs such as licorice (Glycyrrhiza glabra) and Chinese foxglove (Rehmania glutinosa) support the adrenals as well.

#### Homeopathy

There have been few studies examining the effectiveness of specific homeopathic remedies.

#### **Physical Medicine**

Ice packs to the throat will help decrease inflammation. Castor oil packs to the throat will also reduce inflammation. Apply oil directly to skin, cover with a clean soft cloth and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes. For best results, use for three consecutive days.

#### Acupuncture

Acupuncture may be helpful in correcting hormonal imbalances.

#### Massage

Therapeutic massage may be useful in relieving stress.

# Special Considerations

Thyroid problems during pregnancy can cause serious complications.

## 78. Hypochondriasis

Hypochondriasis is overwhelming fear that one has a serious disease, even though physicians can find no evidence of illness. It is based misinterpreting normal body sensations. Mild, occasional preoccupation with disease is quite common. This is not the same as hypochondriasis, which is severe persistent and interferes with work as well as relationships. An estimated 75% to 85% of those who have hypochondriasis also have anxiety, depression, or another mental disorder.

# Signs and Symptoms

- Preoccupation with a serious illness for at least six months
- Persistent fear of illness despite reassurance to the contrary from physicians
- Difficulty maintaining a job, keeping relationships, and performing normal activities

#### What Causes It?

- The belief that an illness may atone for past real or imagined wrongdoing
- Having learned apparent benefits of being sick, such as receiving attention; may occur in one who had a childhood illness or had a sibling with a childhood illness
- Hypochodriasis is sometimes considered a variant of another psychiatric disorder such as anxiety or obsessive-compulsive disorder (OCD); in other words, hypochondriasis may develop from or be a sign of one of these other disorders.

#### Who's Most At Risk?

- These factors increase the risk of developing hypochondriasis: witnessing or experiencing a prolonged childhood illness
- · Family history of hypochondriasis

 Recent stressful event (for example, the death of a close friend or relative)

#### What to be done

Ask specific questions and administer psychological tests to rule out the possibility of other related disorders such as anxiety or obsessive-compulsive disorder. A trained specialist, such as a psychologist or a psychiatrist, may be consulted to aid in the diagnosis and treatment.

# Treatment Options Treatment Plan

In addition to regular visits with a physician, may also prescribe psychotherapy. Group therapy, behavior modification, and cognitive therapy have been reported to work particularly well. Because people with hypochondriasis tend to have other mental health conditions, such as anxiety and depression, treatment of these associated conditions is an important step in resolving the symptoms of hypochondriasis.

#### **Drug Therapies**

Drugs are generally not used to treat hypochondriasis specifically, but medication for associated mental health conditions may improve symptoms of hypochondriasis. Selective serotonin reuptake inhibitors (SSRIs), such as sertraline, fluoxetine, fluoxamine, or paroxetine, are a class of medications that doctor may consider.

# **Surgical and Other Procedures**

Several types of psychotherapy may help:

- Cognitive-behavioral therapy is intended to identify psychological factors that contribute to fears about illness and to correct misinterpretations of body sensations. This model focuses on helping patients recognize that their problem is health anxiety rather than having an actual illness.
- Behavioral-stress management therapy teaches stress management and relaxation techniques to help patients avoid becoming focused on illness during stressful situations. Comparatively, however, cognitivebehavioral therapy may be longer lasting.

# Complementary and Alternative

Cognitive-behavioral therapy and stress management are the cornerstones of treatment for hypochondriasis. Good results have also been documented with the use of acupuncture and music therapy. Regular appointments with a supportive CAM provider, though, may help to relieve health related fears because of the consistency of visits, the reassurance from a professional, and the focus on wellness as well as healthy behaviors.

#### Nutrition

A registered dietitian may also be helpful in creating a healthy eating plan includes:

- Maintain a whole-foods diet that includes plenty of fresh fruits, vegetables, and whole grains.
- Limit sugar, dairy, and refined, processed foods.
- Drink at least eight glasses of water each day to reduce constipation and other gastrointestinal complaints.
- Eat small, frequent meals throughout the day. This helps stabilize blood sugar (which can improve mood) and normalize digestion.

The following may support general health and well-being:

- Multivitamin taken daily
- Mineral supplements (including calcium and magnesium) (*Note:* taking too much calcium may lead to constipation and too much magnesium to gas, bloating, and diarrhea)
- Vitamin B complex, including pantothenic acid (B<sub>5</sub>) and pyridoxine (B<sub>6</sub>); (Note: taking too much niacin (vitamin B<sub>3</sub>), may cause flushing of the skin and perspiration)
- Lactobacillus acidophilus helps to decrease bowel symptoms.

#### Herbs

- Echinacea (Echinacea angustifolia, E. purpurea, E. pallida) to reduce frequency and duration of colds
- Kava kava (Piper methysticum) for anxiety with restlessness. This herb should not be used along with any prescription

  psychotropic

  psychotropic

- medications (used to treat anxiety and certain mental illnesses).
- Lemon balm (Melissa officinalis)
  for calming stress reactions,
  particularly with associated
  gastrointestinal symptoms (such as
  constipation, gas, bloating, nausea)
  or insomnia
- Oat straw (Avena sativa) to assist recovery from cold or other illnesses and strengthen a weakened constitution
- Passionflower (Passiflora incarnata) for restlessness, nervous stress, anxiety, rapid heartbeat related to anxiety, and sleep disorders
- St. John's (Hypericum wort perforatum) for symptoms depression, anxiety and nervous unrest. This herb should not be used with other medications depression or with a class of medications called protease inhibitors such as indinavir. In addition, women who use St. John's wort while on oral contraceptives may experience spotting between periods. This herb may also make skin more sensitive to the sun.
- Skullcap (*Scutellaria lateriflora*) for nervous tension.

# Homeopathy

- Aconitum for a sense of panic and fear; this remedy is most appropriate for individuals who believe that they are so sick they are going to die
- Arsenicum album for anxiety and fear of dying; this remedy is most appropriate for individuals who call the doctor often and are difficult to reassure; children may be worried about everything and tend to act more sick than they actually are

- Lycopodium for general fear and anxiety about health; this remedy is most appropriate for stressed individuals who complain often of stomach problems
- Phosphorus for general anxiety about health; this remedy is most appropriate for individuals who have a fear that something bad will happen (sense of impending doom) and may latch onto the fears of others, but tend to be easily reassured

#### Acupuncture

The studies suggest that acupuncture may be useful for:

- Relieving ongoing fear and apprehension
- Reducing symptoms of emotional stress
- Diminishing perceptions of stress and pain
- Regulating sleep patterns
- Improving work capacity

#### Massage

Some healthcare practitioners believe that regular visits to a massage therapist may help reduce symptoms of hypochondriasis. It is possible, however, that massage could draw attention to physical complaints, thereby increasing symptoms.

#### **Prognosis/Possible Complications**

Stress and anxiety may worsen the symptoms of hypochondriasis. Although hypochondriasis is a chronic illness, early psychiatric treatment combined with a strong motivation to change may increase the chances of a healthy prognosis. Some reports suggest that one-third to one-half of patients improve over time, and one-tenth recover completely from the illness.

#### Follow up

Try to maintain a healthy relationship with primary physician. Want to schedule regular appointments to monitor symptoms.

## 79. Hypoglycemia; Low Blood Sugar

Hypoglycemia is a condition in which there is an abnormally low level of glucose in blood. Normally body keeps blood sugar levels within a normal range through the coordinated work of several glands and their hormones. But factors such as disease or a poor diet can disrupt the mechanisms that regulate sugar levels.

#### Signs and Symptoms

Because glucose is the brain's primary fuel, brain feels the effects of hypoglycemia. The effects include the following.

- Headache
- Excessive sweating
- Blurred vision, dizziness
- Trembling, incoordination
- Depression, anxiety
- Mental confusion, irritability
- Heart palpitations
- Slurred speech
- Seizures
- Fatigue
- Irritability
- Coma

#### What Causes It?

- Drugs (such as insulin or alcohol)
- Critical organ failure (kidney, heart, or liver)
- Hormone deficiencies
- Tumors
- Inherited abnormalities
- Lack of an appropriate diet, especially with a critical illness
- With strenuous exercise several hours after eating
- After gastrointestinal surgery

#### What to be done

Order a blood test called a glucose tolerance test (GTT). If levels are only slightly above normal, may recommend diet and lifestyle changes. If symptoms are severe, will immediately give glucose in either an oral or injectable form to bring blood sugar level back to normal as quickly as possible. Additional tests can determine the cause of low blood sugar.

## **Treatment Options**

It is important to treat low blood sugar immediately to avoid long-term serious

Hypoglycemia effects. resulting exercise several hours after a meal rarely produces serious symptoms. A glass of orange juice and a piece of bread can correct sugar levels within minutes. However, in people with underlying diseases, fluctuating blood sugar levels are more serious and must be treated with oral or injectable forms of glucose.

#### **Drug Therapies**

- Oral glucose for people who are able to swallow (10 to 20 g carbohydrate)
- Intravenous glucose for people who are unable to swallow
- Subcutaneous or intramuscular injection of glucagon is an alternative to the above treatments, but the individual must also eat because the effect of glucagon is short.
- Intravenous mannitoland glucocorticoids may be used to treat an individual who remains in a coma after glucose levels return to normal.

# Complementary and Alternative Therapies

Long-term treatment is aimed at the cause of the hypoglycemia, but alternative therapies may also be useful in regulating blood sugar in the short term.

#### Nutrition

Small frequent meals that are high in protein and complex carbohydrates are best, preferably five or six a day. Cut down on simple carbohydrates including sugar, refined foods, juices, and fruit. Eliminate caffeine, alcohol, and tobacco. Vitamins and minerals that are important for regulating glucose levels include the following.

- Chromium picolinate: 100 to 200 mcg three times per day with meals
- Magnesium: 200 mg two to three times per day
- Vanadyl sulfate: 10 to 20 mg per day
- Zinc: 15 to 30 mg per day
- B complex: 50 to 100 mg per day
- Niacinamide: 500 mg per day

Pyridoxine (B6): 100 mg per day

Pantothenic acid (B5): 250 mg per

Vitamin C: 250 to 500 mg two times per day

Vitamin E: 400 IU per day

#### Herbs

Siberian ginseng (Eleutherococcus senticosus) provides adrenal support. Use tincture 20 drops two times a day or dried extract 100 mg three times a day for two to three weeks with a one week rest before you start taking it again.

A tincture of equal parts of licorice root (Glycyrrhiza glabra), gotu kola Siberian (Centella asiatica), ginseng, and ginger root (Zingiber officinale) may be used in combination to strengthen

adrenals and help hypoglycemic symptoms. Take 10 to 15 drops three times a day. Do not take licorice if you have high blood pressure.

#### Acupuncture

May be beneficial in decreasing stress and increasing coping skills.

#### Follow up

Any underlying condition that may be causing hypoglycemia must be aggressively treated so that episodes do not recur.

#### Special Considerations

Do not ignore the signs and symptoms of hypoglycemia. Untreated, it can cause irreversible brain damage, coma, or even death.

# 80.Hypoparathyroidism

The parathyroids produce parathyroid hormones that regulate blood levels of calcium necessary for strong bones and teeth, nerve function, and blood clotting. Hypoparathyroidism is a rare disorder associated with insufficient production of parathyroid hormone, the inability to make a usable form of parathyroid hormone, or the inability of kidneys and bones to respond to parathyroid hormone production. A deficiency of parathyroid hormone lowers blood calcium levels and raises phosphate levels. Hypoparathyroidism either may be inherited or acquired; the acquired form usually results from parathyroid surgery or an underlying disorder, such as cancer or neck trauma.

# Signs and Symptoms

- Muscle spasm or cramping, typically in hands or feet
- Convulsions
- Cataracts
- Hair loss Dry skin or malformed nails
- Anxiety
- Abnormal sensations such as numbness, tingling, or burning, especially around the mouth and fingers

- Candidiasis, in cases resulting from autoimmune polyglandular syndrome, type I
- Poor tooth development
- Vomiting
- Headaches
- Mental deficiency

#### What Causes It?

- Underdeveloped parathyroid glands at birth
- Medical treatment (radiation to thyroid gland, drug treatment, thyroid or parathyroid surgery)
- An underlying medical condition such as cancer, neck trauma, Wilson's disease (high level of copper and iron in tissues, low levels of magnesium)

# Who's Most At Risk?

- Genetic factors
- Medications that suppress the parathyroid gland, such as asparagine, doxorubicin, cytosine arabinoside, cimetidine, and preparations containing aluminum
- Surgery or removal of the parathyroid gland
- Extensive radiation to or removal of the thyroid gland decords consiste the equitables with

#### What to be done

Conduct a physical examination, checking for muscle spasms, twitching, and seizures. Examine the skin for problems such as dry skin, thinning hair, and fungal infections. In the case of infants, the provider will ask about and check for vomiting, swollen abdomen, apnea (temporary cessation of breathing), and an occasional bluish discoloration. Blood tests can reveal levels of low calcium, high phosphate, decreased magnesium, decreased parathyroid hormone, and other abnormalities. X rays or computed tomography (CT) scans may be used to check for abnormalities in the bones and soft tissues.

#### Treatment Options Prevention

No preventive measures are available for congenital hypoparathyroidism. However, changes in surgical techniques and medical treatment for thyroid and parathyroid disorders helping preserve are to parathyroid glands and reduce the occurrence of acquired hypoparathyroidism.

#### **Treatment Plan**

A lifelong regimen of dietary and/or supplemental calcium and vitamin D is usually required to restore calcium and mineral balance. In the acute phase of hypoparathyroidism, calcium will be administered intravenously; diuretics may be prescribed in that circumstance as well to prevent over excretion of calcium in the urine and to reduce the amount of calcium and vitamin D needed.

# Complementary and Alternative Therapies

As mentioned, calcium and vitamin D supplements are the main treatment for hypoparathyroidism. Dietary choices may help maintain the right balance of these and other nutrients as well.

#### Nutrition

- Calcium if dietary intake is not adequate
- Magnesium aids in the absorption of calcium; plus, often low levels of magnesium are present in the case of hypoparathyroidism
  - Boron enhances the absorption of calcium
  - Vitamin K, produced by bacteria in the intestines or obtained through

the diet (e.g. dark leafy greens) is important for the uptake of calcium by cells throughout the body

Foods rich in calcium include:

- Almonds
- Legumes
- Dark leafy greens
- Blackstrap molasses
- Oats
- Sardines
- Tahini
- Prunes
- Apricots

Sea vegetables

Calcium and vitamin D are absorbed in an acidic environment; lemon juice, for example, may be added to greens to facilitate calcium absorption. Other dietary recommendations made by some naturopaths to help maintain healthy calcium levels are as follows:

- Limit carbonated beverages, as they are high in phosphates and may reduce calcium absorption; dairy may diminish calcium absorption for similar reasons.
- Avoid caffeine (such as in coffee, black tea, colas, and chocolate); it can lead to calcium loss through the urine.

#### Herbs

- Horsetail (Equisetum avense)
- Oat straw (Avena sativa)

#### Homeopathy

- Calcarea carbonica (calcium carbonate)
- Calcarea phosphorica (calcium phosphate)

**Prognosis/Possible Complications** 

The prognosis for hypoparathyroidism is fair to good, especially when a diagnosis is made early. Several complications may occur, including acute muscle spasms leading to breathing problems; cataracts; muscle, ligament, and nervous system disorders; and stunted growth, tooth malformations, and mental retardation in childhood.

Follow up
Those who have hypoparathyroidism will require lifelong monitoring by a physician.

#### 81. Hypothermia

Hypothermia results from an abnormally low body temperature, which causes the circulatory, respiratory, and nervous systems to slow down. Body temperature is a balance between how much heat is produced and how much heat is lost, with the brain acting as the thermostat. Severe hypothermia can cause an irregular heartbeat, which can lead to heart failure and possibly death.

## Signs and Symptoms

- Skin that is cold to the touch
- Absence of shivering
- Lethargy, drowsiness
- Weakness, clumsiness
- Irritability, combativeness
- Confusion, delirium, hallucinations
- Slow reflexes
- · Seizure, stupor, or coma
- Slowed, shallow, or arrested breathing
- Slowed, irregular, or arrested heartbeat

#### What Causes It?

Hypothermia can happen from accidental exposure to cold, to immersion in cold water, or to trauma from a serious accident. In the elderly, hypothermia may develop over hours or days as a result of poor body heat regulation, inability to properly sense the cold, or living in a cold environment in the winter. Diseases of the endocrine glands also may result in decreased heat production in the body.

# Who's Most At Risk?

- Exposure to cold
- Immersion in cold water
- Severe trauma, especially brain injury or burns
- Immobilization (not moving for long periods)
- Age-related physical problems: half of all hypothermia-related deaths occur in people over age 65
- Pre-existing disease such as heart failure, pulmonary infection, other toxic infections, or endocrine disorders
- Dehydration

- Drugs such as alcohol, tranquilizers, sedatives, hypnotics, or antipsychotics
- Poverty, malnutrition, or homelessness
  - Social isolation or mental illness

#### What to be done

Severe hypothermia is a life-threatening condition.

## Treatment Options

#### Prevention

Hypothermia can usually be prevented by preparing appropriately for environmental conditions and by recognizing the early symptoms. Avoid overexertion, eat enough food, drink enough fluids, and do not drink alcohol. People who are prone to hypothermia, such as the elderly or the homeless, can receive assistance from social service agencies to help them find adequate housing, heat, and clothing.

#### Treatment Plan

Warming the person can treat mild hypothermia. Wet clothing should be removed and replaced with dry, warm clothing and/or blankets. Other techniques include using hot water bottles, warm baths, or heat packs placed under the arms and on the chest, neck, and groin. In severe cases, if breathing and heartbeat have stopped, the person should not be considered dead until efforts have first been made by medical professionals to warm him or her. At the hospital, the medical team will use heated intravenous fluids. The person may be wrapped with blankets in a warm room or put into a large tub of warm water.

#### Drug Therapies

In severe or complicated cases of hypothermia, intravenous drug therapy may be used.

# Complementary and Alternative Therapies

If patient become hypothermic, avoid supplements and herbs, such as ginseng, hawthorn, rosemary, and possibly cocoa seed and yellow Jessamine root, which dilate blood vessels and may worsen hypothermia.

#### Nutrition

Eating enough calories in the form of proteins and fats before and during exposure to cold weather may help prevent hypothermia, particularly in the elderly. If expect to be exposed to the cold, carry highcalorie snacks, such as protein bars and Regular intake of fluids-water, juices, and electrolyte replacement drinksis important, too, and prevents dehydration. Being dehydrated increases risk for hypothermia. Do not wait until hungry or thirsty to eat or to drink fluids. Don't drink alcohol or caffeine, as these substances dilate blood vessels and increase blood flow away from central core, causing it to cool

#### Herbs

Ginseng (Eleutherococcus senticosus and Panax ginseng) is known as an adaptogen. It is used to increase resistance to adverse conditions such as unusually cold climate. It may help prevent hypothermia in people who are regularly exposed to extreme cold weather, in the elderly, and in those who are weak or have a chronic disease.

An Indian herbal preparation containing Winter cherry (Withania somnifera), Asparagus (Asparagus racemosus), Giant potato root (Pueraria tuberosa), Velvet bean (Mucuna pruriens), Yam (Dioscorea bulbifera), Elephant creeper (Argyreia speciosa), Long pepper (Piper longum), and asphalt (a mixture of plant and microbial waste products) was given to rats to control hypothermia.

Frequently, warming the extremities occurs after the warming of the core in treating hypothermia. A Chinese herbal medicine, called TSGS-to in Japanese, was tested in rats, and was effective in raising the heat radiating from the rats' tails. The formula contained the herbs Angelica root (Angelicae radix), Cinnamon bark (Cinnamomi cortex), Evodia fruit (Evodiae fructus), Licorice (Glycyrrhizae radix), dried ginger (Zingiberis rhizoma), Akebia (Akebiae caulis), Jujubae (Zizyphi fructus), Asiasarum root (Asiasari radix), and Peony root (Paeoniae radix). This combination of herbs may prove useful for hypothermic patients whose extremities often remain cold despite warm conditions and improved core temperatures.

Certain herbs used in Traditional Chinese Medicine (TCM) may cause hypothermia, instance, rats given Clerodenron fragrans (Ventenaceae) became hypothermic in moderate and temperatures because their bodies produced less heat. Also, rat studies show that TCM remedies used to treat fever, such as Huang chin (Chinese Skullcap; Scutellaria baicalensis George), may hypothermia.

#### Homeopathy

- Aconitum very useful remedy when used just following exposure to cold, including in cases of shock and when extremities are cold, tingling, or numb
- Arnica important homeopathic remedy for first aid, particularly in the case of shock and following trauma
- Carbo vegetabilis for icy cold, bluish skin, particularly when the person is weak, sluggish, close to fainting, and short of breath
- Cuprum metallicum for bluish the discoloration of accompanied by muscle cramps

#### Acupuncture

Caution must be exercised when using acupuncture to treat fever. Stimulating certain acupuncture points with needles can produce hypothermia by decreasing the heat from metabolism and by dilating blood vessels in the skin.

#### Massage

Massage should not be used in the case of hypothermia. Massage may dilate the blood vessels on the surface of the body, drawing blood away from the core and vital organs such as the heart and the brain. During cause may hypothermia, this circulatory system to collapse.

Prognosis/Possible Complications

People with moderate to severe hypothermia can face serious complications and even death. Children are more likely to recover from severe hypothermia than adults. The mortality rate for hypothermia in the elderly is about 50%. There are many possible complications from hypothermia, including hypoxia, gangrene in the hands and feel, inflammation of the pancreas, fluid in the

lungs, pneumonia, kidney failure, and heart irregularities.

Follow up

A hypothermic patient should be transported very carefully as there is a tendency toward irregular heartbeat that could be fatal. Normal body temperature in the elderly should be restored slowly, or permanent low blood pressure may result. All people with hypothermia must be closely monitored until their body temperature returns to normal

#### 82.Infantile Colic

Colicky babies cry constantly and hard at about the same time each day at least three days a week. An about one in five baby, usually a firstborn boy, develops colic. Usually seen between 2 weeks and 6 months of age.

#### Signs and Symptoms

- Baby cries for more than three hours on at least three occasions a week, but is otherwise healthy.
- Baby kicks a lot, pulls his or her legs up close, and makes tight fists.
- Baby's tummy seems hard and he or she burps and passes gas often.
- The crying sounds like baby is in great pain.
- Baby spits up frequently after feeding.

#### What Causes It?

- The baby's nervous or digestive system may be immature
- The baby needs comforting, or is over- or under-stimulated
- If breast-fed, the baby may be reacting to something the mother's diet
- Antibiotics given at birth, either to the infant or the mother

# What to be done

Ask if the baby is eating well and gaining weight or has diarrhea, fever, or unusual stools. If you are breast-feeding, may ask about foods you have eaten. Remember that colic usually disappears at 6 months of age.

**Treatment Options** 

- If breast-feeding, nurse on demand, usually every two to three hours. Avoid caffeine, dairy products, citrus fruits, soy products, and spicy foods. Elevate the infant's head during and after feedings.
- If bottle-feeding, ask your physician to recommend a formula that is not

based on cow's milk and that is not iron-fortified.

- Do not offer your baby solid foods before age 6 months.
- Hold baby close, offer a pacifier, try rocking or rubbing the back, give baby a warm bath, take a car ride with baby, play soft music, or use an infant swing to ease the crying.

#### **Drug Therapies**

No drugs are currently recommended, although simethicone may be helpful.

#### Complementary and Alternative Therapies

Eliminating gas-producing foods and using supportive herbal or homeopathic therapies can help reduce or eliminate infantile colic. In addition, playing soft music, rocking the infant, or using "white noise" (for example, a dryer) may be helpful in soothing the infant. Reducing stimuli and placing the infant in a dim, quiet room may help calm the baby.

#### Nutrition

Acidophilus (especially Bifidus spp.) can be given to both the breast-feeding mother and infant. Use 1 capsule with meals three times per day for adults; 1 capsule per day for infants

#### Herbs

A tea made from fennel seed (Foeniculum vulgare) or anise seed (Pimpinella anisum) may be given directly to the infant (1 tsp. before and after feedings) or drunk by the breast-feeding mother (1 cup three to six times per day). Both fennel and anise act as gastrointestinal relaxants and help expel gas. Other herbs that have relaxing effects and help reduce colic are lemon balm (Melissa officinalis), (Nepeta catnip cateria). peppermint (Mentha piperita), spearmint (Mentha spicata), and linden flower (Tilia cordata). These may be added to the above tea as needed.

# Homeopathy

- Aethusa for infants who cannot digest milk, who vomit, and have diarrhea
  - Belladonna for colic with spasms that come and go quickly; the abdomen may feel warm to the touch and symptoms may coincide with constipation; children for whom this remedy is most appropriate are often restless and shrieking
  - Bryonia for pain worsened by movement and pressure; remedy is most appropriate for irritable infants who lie still with knees drawn up
  - Calcarea carbonica for fairskinned infants with foul smelling vomit, stools, and perspiration
- Chamomilla for excessively irritable and screaming infants who are relieved by constant holding and rocking; infants for whom this remedy is appropriate are often teething and have green, foulsmelling diarrhea
- Colocynthis for restless, irritable infants whose symptoms of colic are relieved by firm pressure; in these infants diarrhea and pain may occur after eating fruit; infant tends to bring knees up to abdomen
- Lycopodium for infants who cannot stand pressure on abdomen (even diapers must be worn loosely); symptoms tend to worsen between 4 and 8 pm and then again after midnight
- Magnesia phos for infants whose symptoms of colic are relieved with gentle pressure or warmth applied to the abdomen, or while they are bent over; bloating causes the infant to loosen clothing; belching does not relieve pain
- Natrum phos -for colic with no other distinguishing symptoms

- Nux vomica for colic which occurs when breastfeeding mother eats rich food, drinks alcohol, or drugs (recreational or medicinal)
  - Pulsatilla —for infants with bloated abdomens after eating, constipation alternating diarrhea; may be aggravated by warm rooms, heat, or if the diet of the breastfeeding mother includes fruits, fats, pastries, or ice cream; relieved by rocking

#### Chiropractic

Chiropractors frequently treat infantile colic with a form of gentle spinal manipulation specially modified for infants. Infants who received chiropractic care demonstrated a 67% reduction in daily hours of colic compared to a reduction of only 38% in the dimethicone.

#### **Physical Medicine**

Warm baths may help relax and soothe colicky infants. Add 3 to 4 drops of essential oil of lavender or lemon balm to enhance the benefit.

#### Massage

Clockwise abdominal massage may help relieve spasm and expel gas. Use 3 to 5 drops of tincture of catnip in 1 to 2 tsp. of enhance almond or olive oil to effectiveness. Apply warmth.

#### Follow up

Use whatever works, and remember that your baby will outgrow the colic in a few weeks or months. Keep in mind, however, that colicky babies often grow up to have other allergy-related health problems, such as ear infections, asthma, and digestive problems.

#### **Special Considerations**

Never shake baby. This can cause serious or fatal brain damage. If you are feeling overwhelmed, try the steps listed below.

- Have someone else watch your baby while you get away for a while.
- Join a support group.

# 83.Influenza; Flu

Influenza, or "flu," is a common infection caused by a virus affecting the

respiratory tract. Its symptoms are usually more severe than the common cold and are more likely to affect other parts of body like stomach and muscles. The flu is very contagious - spreading easily from one person to the next. While most cases run their course in one to two weeks, lifecomplications threatening such pneumonia are possible, especially in the elderly or people with chronic illnesses.

Signs and Symptoms

- Fever that comes on suddenly (101 to 104 F)
- Chills
- Headache
- Muscle aches
- 0
- Nonproductive cough
- Sore throat
- Sneezing, runny nose, stuffy nose
- Loss of appetite
- Nausea, vomiting, or diarrhea, especially in children

#### Causes

Viruses that are spread through the air by sneezes and coughs cause influenza. These viruses cause a very mild illness, or none at all. Others cause serious, widespread illness.

#### Risk Factors

People most likely to get influenza are those whose immune systems are not working properly (for example, transplant recipients or people with HIV), or those whose lifestyle or work brings them into frequent contact with sick people. complications from influenza are:

- Age over 50
- Having serious underlying medical condition like diabetes, heart disease, lung disease (such as asthma or cystic fibrosis), or kidney disease
- Having weakened immune system.

If you are at risk for complications, you should receive the vaccine annually

# Diagnosis

Take a chest X ray if there is concern about complications such as pneumonia.

# Preventive Care

Annual flu shots are recommended if you:

- Are 50 years of age or older
- Have chronic heart, lung, or kidney disease
- Live in an institution (such as a nursing home)

- Have a weakened immune system
- Have sickle cell anemia

You should not receive the vaccine if you are allergic to eggs.

#### **Treatment Approach**

The most important aspect of treatment is and fluids. Taking mild medication, available without a prescription. can help relieve muscle aches and pains. herbs. supplements, homeopathic remedies may help some of symptoms and acupuncture may help reduce fever.

#### Lifestyle

- Drink a lot of water
- Rest to restore energy and avoid complications like pneumonia.
- Eat a diet rich in fresh fruits and vegetables. These foods provide lots of antioxidants, especially vitamins A and C.
- Exercise regularly, which may diminish your chances of getting the flu and may improve response to the vaccine.
- Minimize stress and reaction to stress. Consider yoga, tai chi, or other forms of relaxation on an ongoing basis. Stress can put you at increased risk for viruses like influenza.

#### Medications

- Acetaminophen, aspirin, or ibuprofen - for fever reduction and relief of minor aches and pain. Note: aspirin should NEVER be given to children with a viral illness because of the risk of a lifethreatening disease called Reye's syndrome, which can affect the liver and brain.
- Antiviral medications—amantidine and rimantadine for prevention and treatment of certain types of flu; zanamivir and oseltamivir to reduce the symptoms and duration of flu

#### **Nutrition and Dietary Supplements** Lactobacillus acidophilus

Studies have been quite promising in terms of the ability of lactobacillus supplements or lactobacillus in certain milk and yogurt products to help reduce the likelihood of getting a respiratory infection, like the flu, even in children.

#### Spirulina

Spirulina is widely used to enhance immune function. Spirulina has activity against influenza in invitro.

#### Vitamin C

There have been a few studies suggesting that taking large doses of vitamin C supplements at the onset of cold or flu symptoms, or just after exposure someone with one of these ailments, can shorten the duration of the illness or ward it off altogether.

#### Zinc

Zinc plays an important role in the immune system, which may explain why it seems to be helpful in protecting against infections influenza. Zinc supplementation enhances immune system activity and protects against a range of infections including colds and upper respiratory infections (like influenza).

#### Herbs

# Astragalus (Astragalus membranaceus)

Astragalus has been used traditionally to enhance the immune system, including possibly preventing and treating colds and flus. Some practitioners claim that this herb shortens the duration of these viral illnesses. Astragalus should not be used if you are taking certain medications for HIV or other viruses.

## Celery seed (Apium graveolens)

It has been used for thousands of years for a variety of reasons including by Ayurvedic physicians to treat colds and flus.

## Echinacea (Echinacea purpurea)

Echinacea is primarily used to reduce the symptoms and duration of the common cold and the flu, such as pharyngitis, cough, and fever.

#### Elderberry (Sambucus nigra.)

A standardized extract of elderberry can enhance immune function, including in people who have influenza.

#### Eucalyptus (Eucalyptus globulus)

Eucalyptus is commonly used in remedies to treat the symptoms of cold or flu, cough. Herbalists recommend the use of fresh leaves in teas and gargles to soothe sore throats. Ointments containing eucalyptus leaves are also applied to the nose and chest to relieve congestion. Eucalyptus oil helps loosen phlegm, inhaling eucalyptus vapors to help treat coughs and the flu. Teas containing eucalyptus leaves have also been

# Goldenrod (Solidago virgaurea)

Herbalists for a wide range of health problems including colds and flus use goldenrod.

# Goldenseal (Hydrastis canadensis)

Goldenseal is often combined Echinacea preparations in designed to immune system. Many strengthen the professional herbalists recommend goldenseal for colds and flu.

# Pau d'arco (Tabebuia avellanedae)

Pau d'arco, or the inner bark of the Tabebuia avellanedae tree, is native to Brazil and has been used traditionally to treat a wide range of conditions including fever.

# Peppermint (Mentha x piperita)

Peppermint is widely used for cold and flu symptoms. This is because peppermint and its main active agent, menthol, are effective decongestants. Peppermint is soothing and calming for sore throats (pharyngitis) and dry coughs as well.

#### Siberian ginseng (Eleutherococcus senticosus/Acanthopanax senticosus)

Siberian ginseng extract had improvements in a number of patients that reflect the functioning of the immune system. An extract of Siberian ginseng slowed the replication of certain viruses, including influenza an as well as human rhinovirus and respiratory syncytial virus.

#### Acupuncture

For some individuals, as reported in the medical literature, acupuncture can help bring down fever when the flu.

#### Homeopathy

A combination remedy including Eucalyptus, Gelsemium, Aconite. Ipecacuanha, Phosphorus, Bryonia, and Eupatorium perfoliatum

barbarice mixture of Anas hepatis and Cordis extractum

- Gelsemium -- for chills, weakness, lack of energy, fever, and headaches in the back and top of the head; this one of the most common homeopathic remedies for the flu
- Eupatorium perfoliatum -- for deep aches, sneezing and coughing
- Nux vomica -- for violent vomiting, irritability, dry cough, chills, and a

stuffy nose that develops into a watery, irritating discharge

Other Considerations

Prognosis and Complications

As stated earlier, most healthy individuals get over the flu in one to two weeks. For those at high risk as described in the section called Risk Factors, certain serious, even life threatening, complications can occur including:

- Pneumonia
- Encephalitis (an infection of the brain)
- . Secondary bacterial infection elsewhere in the body

## 84.Insect Bites; Bites And Stings, Insect

Insect bites or stings can be from a host of agents including bees, spiders, fleas, hornets, wasps, and mosquitoes. Some cause cause pain including others allergic anaphylaxis. Another common called angioedema, which reaction is involves swelling throughout especially the face, lips, and around eyes. More people have allergic reactions to stinging insects than to biting insects.

Signs and Symptoms

- Red, swollen, warm lump
- 0 Hives
- Itching, tenderness, pain
- Sores from scratching; can become infected
- allergic reactions Serious when symptoms spread. These include difficulty breathing, dizziness, nausea, diarrhea, fever, muscle spasms, or loss consciousness. Call for emergency medical help right away.

Causes

Stinging insects include bumblebees, yellow jackets, hornets, wasps, and fire and harvester ants. Biting insects include conenose bugs, mosquitoes, horseflies, deerflies, spiders, bedbugs, and black flies.

Prevention

- Try not to provoke insects. For example, avoid rapid, movements around insect hives or nests.
- Avoid perfumes and floralpatterned or dark clothing.
- Use appropriate insect repellants and protective clothing.
- Exercise caution eating when outdoors, especially with sweetened beverages or in areas near garbage cans

The following tips may help you remember some important practices:

- Don't forget to cover head. Using a full brimmed hat will help shield neck as well.
- Tuck pant cuffs into socks. This helps protect ankles - a common spot for bites or stings.
- Check clothes periodically for bugs.
- Use protective netting sleeping outdoors. Such equipment is available for outdoor eating activities as well.

Applying insect repellent to clothing can help avoid skin irritation. When in an area infested with mosquitoes, sand flies, or ticks, use chemical insect repellent. Avoid use of insect repellent on sunburned skin. When applying both sunscreen and bug repellent, apply the sunscreen first. Wait 30 minutes before applying the bug repellent. DO NOT use bug repellent on children's hands because of the chance they may rub their eyes or put their hands in their mouths. NEVER inhale or ingest insect repellent.

**Treatment Approach** 

In most cases, bites and stings can be easily treated at home, except in the case of a severe allergic reaction like anaphylaxis, which can be fatal if not treated IMMEDIATELY. If such an emergency occurs:

- Check the person's airway, breathing, and pulse.
- Use the person's Epinephrine pen or other emergency kit if they have
- Try to keep the person calm.
- Remove nearby rings and other items in constricting case swelling.

Stay with the person until medical help arrives.

For non-emergency bites or stings.

#### Lifestyle

Local reactions of redness, minor swelling, pain or itching at the site of the bite generally go away in three to seven days with no treatment, even if the effected area is large. To relieve symptoms, follow these steps:

- Remove the stinger if it is still present by scraping the back of a knife or other straight-edged object across the stinger. DO NOT use tweezers. These may squeeze the venom sac and increase the amount of venom released. This would worsen the local swelling and pain.
- Wash thoroughly with soap and water to avoid infection. Watch for signs of infection over the next several days like increased redness or red streaking along your skin.
- Place an ice pack, wet compress, or ice wrapped in a cloth on the site for 10 minutes two times (that is, 10 minutes on, 10 minutes off, and then 10 minutes on again) to reduce swelling.
- Take an antihistamine or apply a cream that reduces itching (like Calamine or Benadryl ointment) if you can't control the temptation to scratch.

#### Medications

- Antihistamines may recommended for itching swelling.
- Physician may prescribe antibiotics if infection is present.
- If the reaction is serious enough that hospital visit is warranted. antihistamines may be intravenously and epinephrine (adrenaline) may be administered.

#### **Nutrition and Dietary Supplements** Bromelain

Bromelain-topical use recommended by some clinicians to help reduce swelling from insect bites or stings; turmeric (Curcuma longa) may enhance the effects of bromelain.

# Omega-3 Essential Fatty Acids

Omega-3 essential fatty acids have antiinflammatory properties that may help protect against the extreme reaction of anaphylaxis and other allergic responses, There was a lower death rate from anaphylactic shock in animals on a high omega-3 fatty acid diet compared to those on a high omega-6 diet.

# Quercetin & Other Flavonoids

If a history of an allergy to bees, wasps, or other insects, taking quercetin supplements or eating foods high in flavonoids on a regular basis. Animal studies appear to support this traditional use of quercetin. If sensitive to citrus or take calcium-channel blockers to treat high blood pressure, you avoid citrus-based forms flavonoids. Vitamin C may enhance the effects of quercetin.

#### Herbs

- Arnica (Arnica montana). remedy commonly used homeopathic doses, has been used as a topical herb for inflammation from insect bites.
- Lemon balm (Melissa officinalis) - traditional treatment for relief of insect bites or stings.
- Stinging nettle (Urtica dioica; Urtica urens) - Applying juice from the stinging nettle to the skin may relieve pain from insect bites.
- longa) Turmeric (Curcuma strengthens the effects of bromelain. The oil of turmeric may also work repellent in as a natural bug combination with citronella and Eucalyptus, other essential oils. lavender, lemongrass, pennyroyal, and hairy basil are amongst the additional oils, along with extracts that such a bean, vanilla professional might consider and teach you to appropriately make and use.

#### Homeopathy

Apis mellifica— for stinging pains with rapid swelling and affected area that is warm to the touch; this remedy is most appropriate for individuals who feel better with Apis applications; recommended if hives are present of

if *Ledum* does not reduce pain or swelling after 4 hours

- Hypericum for bites accompanied by sharp, shooting pains that often occur in sensitive areas, such as at the ends of fingers or toes
  - Ledum— most commonly used homeopathic agent for bites and stings from bees, mosquitoes, wasps, or spiders; affected area is
- cold to the touch but cold applications or immersion in cold water improves symptoms
- Staphysagria— for children with large, itchy mosquito bites that may create large welts
  - Urtica urens— for red, swollen bites with itching and stinging; may be used instead of Apis to treat hives

## 85.Insomnia; Sleeplessness

Insomnia is the inability to sleep during a period in which sleep should normally occur. Sufficient and restful sleep is a human necessity. The average adult needs slightly more than eight hours of sleep per day. People with insomnia tend to experience one or more of the following sleep disturbances: (1) difficulty falling asleep at night, (2) waking too early in the morning, or (3) waking frequently throughout the night. Insomnia may stem from a disruption of the body's circadian rhythm, an internal clock that governs the timing of hormone production, sleep, body temperature, and other functions. While occasional restless nights are often normal, prolonged insomnia can interfere with daytime function. and may impair concentration, diminish memory, increase the risk of substance abuse, motor vehicle accidents, headaches, depression.

# Signs and Symptoms

- Not feeling refreshed after sleep
- Inability to sleep despite being tired
- Daytime drowsiness, fatigue, irritability, difficulty concentrating, and impaired ability to perform normal activities
- Causes Anxiety as bedtime approaches

# Insomnia is occasionally a symptom of an underlying medical or psychological condition, but it may also be caused by stress or lifestyle choices, such as excessive coffee and alcohol consumption. About 50% of insomnia cases have no identifiable cause. Some conditions or situations that commonly lead to insomnia include:

- Substance abuse—consuming excessive amounts of caffeine, alcohol, recreational drugs, or certain prescription medications; smoking can cause restlessness and smoking cessation may also result in temporary insomnia
- Disruption of circadian rhythms shift work, travel across time zones, or vision loss; circadian rhythms are regulated, in part, by release of melatonin from the brain
- Menopause—between 30% and 40% of menopausal women experience insomnia; this may be due to hot flashes, night sweats, anxiety, and/or fluctuations in hormones
- Hormonal changes during menstrual cycle—insomnia may occur during menstruation; sleep improves midcycle with ovulation
- Advanced age—biological changes associated with aging, underlying medical conditions, and side effects from medications all contribute to insomnia
- Medical conditions—
  gastroesophageal reflux,
  fibromyalgia or other chronic pain
  syndromes, heart disease, arthritis,
  attention deficit hyperactivity
  disorder, and obstructive sleep
  apnea.
  - Psychiatric and neurological conditions—anxiety, depression, manic-depressive disorder, dementia, Parkinson's disease, restless leg syndrome (a sense of indescribable uneasiness, twitching,

or restlessness that occurs in the legs after going to bed), post-traumatic stress disorder

- Certain medications decongestants, bronchodilators, and beta-blockers
- Excessive computer work
  - Partners who snore

#### Risk Factors

- Age—the elderly are more prone to insomnia
- Stressful or traumatic event
- Night shift or changing work schedule
- Travel across time zones
- Substance abuse
- Asthma—bronchodilators occasionally cause insomnia
  - Excessive computer work

#### Diagnosis

Ask questions to determine whether snore, have any underlying medical conditions, take medications, or have recently undergone any significant life changes. Keeping a sleep diary (recording all sleep-related information) may help the physician determine the type of insomnia and how best to treat it. The primary care physician may recommend a sleep specialist or a sleep disorders center where brain waves, body movements, breathing, and heartbeats may be electronically monitored during sleep.

#### **Preventive Care**

The following lifestyle changes can help prevent insomnia:

- Exercising regularly—best when done before dinner; exercise can stimulate arousal so should not be done too close to bedtime
- Avoiding caffeine (especially after noon) and nicotine
- Getting regular exposure to late afternoon sun—stimulates release of melatonin which helps regulate circadian rhythm
  - Practicing stress reduction techniques such as yoga, meditation, or deep relaxation
  - Early treatment of insomnia may also help prevent psychiatric disorders such as depression

# **Treatment Approach**

Behavioral techniques are the preferred treatments for people with chronic

insomnia. Up to 80% of those with insomnia improve with these approaches, and, unlike many medications for insomnia, behavioral techniques do not carry significant risks and side effects. Healthy sleep habits are necessary for treating insomnia, regardless of its cause, particularly in combination with mind/body therapies such as stimulus control therapy, bright-light therapy, and cognitive-behavioral therapy.

#### Lifestyle

The following healthy sleep habits may help to treat the condition:

- Maintaining a consistent bed and wake time
- Establishing the bedroom as a place for sleep and sexual activity only, not for reading, watching television, or working
- Avoiding naps, especially in the evening
- Taking a hot bath about two hours before bedtime
- Keeping the bedroom cool, wellventilated, quiet, and dark
- Avoiding looking at the clock; this promotes anxiety and obsession about time
- Avoiding fluids just before bedtime
  - Avoiding television just before bedtime
  - Eating a carbohydrate snack, such as cereal or crackers, just before bedtime
  - If sleep does not occur within 15 to 20 minutes in bed, moving to another room with dim lighting

#### Medications

Generally, medications may be helpful for short-term insomnia, but they are not recommended for insomnia that persists for more than 4 weeks. These medications include:

- Sleeping pills (such diphenhydramine)—promote if insomnia occurs occasionally

   sleeping pills (such diphenhydramine)—promote only only only occasionally
  - Antidepressants (such trazodone)—may be prescribed in low doses at night to promote sleep
- Benzodiazepines (such as triazolam and lorazepam)—often very successful for resolving insomnia in the short term; long-term use may

have serious side effects including daytime drowsiness, depression. sleep walking, and addiction; must not be used with alcohol

Non-benzodiazepine short-acting hypnotics (such as zoldipam and zaleplon)-fewer side effects and less likely to cause addiction than benzodiazepines; particularly effective for elderly and depressed people; side effects may include nightmares and headaches; should not be used with alcohol

## **Nutrition and Dietary Supplements**

A carbohydrate snack of cereal or crackers with milk before bed may help because foods rich in carbohydrates and low in protein and fat may boost the production of serotonin and melatonin, brain chemicals thought to promote sleep. The following dietary supplements may also be helpful in promoting sleep:

#### L-tryptophan and 5-hydroxytryptophan (5-HTP)

Medical research indicates that supplementation with 1 g L-tryptophan before bedtime can induce sleepiness and delay wake times. L-tryptophan is thought to bring on sleep by raising levels of serotonin, a body chemical that promotes relaxation. This supplement should be used with caution; however, as it may adversely interact with certain anti-depressants (including selective serotonin reuptake inhibitors [SSRIs] and monoamine oxidase inhibitors [MAOIs]) and cause serious negative side effects. Reports of eosinophilia myalgia syndrome (EMS; an autoimmune disorder characterized fatigue, fever, muscle pain and tenderness, cramps, weakness, hardened skin, burning, tingling sensations in the extremities), from contaminated tryptophan supplements surfaced in 1989, and isolated incidents of EMS continue to be reported on occasion. Studies also suggest that 5-hydroxytryptophan, made from tryptophan in the body or available in supplement form, may be useful in treating insomnia associated with depression. Like tryptophan, however, reports of EMS have been associated with its use.

# Melatonin

Melatonin supplements appear to be most useful for inducing sleep in certain people, particularly those with disrupted circadian rhythms (such as from jet lag or shift work) or those with low levels of melatonin (such as some people with schizophrenia). In fact, a recent review of scientific studies found that melatonin supplements help prevent jet lag, particularly in people who cross five or more time zones. Melatonin may modestly effective for treating certain types of insomnia; few studies have investigated whether melatonin supplements are safe and effective over the long term. Generally, when melatonin is used, 1 to 3 mg of the supplement is recommended for sleep, but little as 0.3 mg has been used successfully.

#### Herbs

#### Valerian (Valeriana officinalis)

Valerian acts as a mild sedative and improves both the ability to fall asleep and the quality of sleep. Valerian extract, an herbal mixture containing valerian, hops (Humulus lupulus), and lemon (Melissa officinalis), or placebo. Valerian should not be combined with barbiturates, which currently are rarely prescribed for insomnia. A typical dose of valerian ranges from 150 to 450 mg per day.

#### Kava kava (Piper methysticum)

Kava kava is effective for insomnia. Kava kava and diazepam induce similar changes in brain wave activity. Although quite rare, kava may cause skin reactions and liver failure. This herb should not be used at the same time as benzodiazepines.

Other herbs that a professional herbalist may use to treat insomnia include:

- Passionflower (Passiflora incarnata)
- Hops (Humulus lupulus)
- Jamaica dogwood (Piscidia erythrina/Piscidia piscipula)
- Lemon balm (Melissa officinalis)
- flower (Lavandula Lavender angustifolia)
- chamomile (Matricaria German recutita)
- Motherwort (Leonarus cardiaca)
- Gotu kola (Centella asiatica)
- Skullcap (Scultellaria lateriflora)

#### Homeopathy

Aconitum - for insomnia that occurs as a result of illness, fever,

- or vivid, frightening dreams; commonly used for children
- Argentum nitricum for impulsive children who are restless and agitated before bedtime and cannot fall asleep if the room is too warm
- Arsenicum album for insomnia that occurs after midnight due to anxiety or fear; this remedy is most appropriate for demanding individuals who are often restless, thirsty, and chilly
- Chamomilla for insomnia caused by irritability or physical pains; sleep may be disturbed by twitching and moaning; this remedy is appropriate for infants who have difficulty sleeping because they are teething or colicky; older children may demand things, then refuse them when they are offered
- Coffea for insomnia due to excitable news or sudden emotions; this remedy is most appropriate for individuals who generally have difficulty falling asleep and tend to be light sleepers; often used to counteract the effects of caffeine, including in infants exposed to caffeine by way of breastfeeding
- Ignatia for insomnia caused by grief or recent loss; this remedy is most appropriate for individuals who yawn frequently or sigh while awake
- Kali phosphoricum for night terrors associated with insomnia; this remedy is most appropriate for individuals who are easily startled and restless, often with fidgety feet; anxiety is often caused by both nightmares and events in the individual's life
- by anxiety, anger, irritability, or use of caffeine, alcohol, or drugs; this remedy is most appropriate for individuals who wake up early in the morning, for children who often have dreams of school or fights and may be awakened by slight disturbances; nux vomica may also be used to treat insomnia that occurs as a side effect of medications

- Passiflora for the elderly and young children, whose minds are
- Pulsatilla for women and children who are particularly emotional and do not like sleeping alone; sleeping in a warm room tends to worsen insomnia and the individual may cry due to the inability to fall asleep
- Rhus toxicodendron for restlessness and insomnia caused by pains that occur when the individual is lying down

#### Acupuncture

Through a complex series of signals to the brain, acupuncture increases the amount of certain substances in the brain, such as serotonin, which promote relaxation and sleep. Studies of elderly people with sleep disturbances suggest that acupressure enhances sleep quality and decreases awakenings during the night

#### Chiropractic

It is speculated that, in these cases, spinal manipulation may have a relaxing effect on the nervous system.

#### Massage and Physical Therapy

Massage has long been known to enhance relaxation and improve sleep patterns. While massage alone is an effective method for relaxation, studies suggest that massage with essential oils, particularly lavender (Lavandula angustifolia), may result in improved sleep quality, more stable mood, increased mental capacity, and reduced anxiety.

#### Mind/Body Medicine

These methods, with the guidance of a sleep specialist or a sleep specialty team, are singly used to treat insomnia, but they may also be combined with other methods of treatment. These methods include:

#### Sleep Diary

Keeping a daily/nightly record of sleep habits (including the amount of sleep, how long it takes to fall asleep, the quality of sleep, the number of awakenings throughout the night, any disruption of daytime behaviors, attempted treatments and how well they worked, mood, and stress level) can help a person understand and, consequently overcome his or her insomnia.

Stimulus Control Techniques

This technique involves learning to use the bedroom only for sleeping and sexuality. Individuals using this technique learn to go to bed only when tired and leave the bedroom when not asleep. They must also wake up at the same time every day, including weekends and vacations, regardless of the amount of sleep they had.

Sleep Restriction

This method involves improving sleep "efficiency" by attempting to spend at least 85% of time in bed asleep. The time spent in bed is decreased each week by 15 to 20 minutes until the 85% goal is achieved. Once accomplished, amount of time in bed is increased again on a weekly basis.

**Relaxation Training Techniques** 

Progressive relaxation, meditation, yoga, guided imagery, hypnosis, or biofeedback can break the vicious cycle of sleeplessness by decreasing feelings of anxiety about not being asleep. These therapies significantly reduce the amount of time it takes to fall asleep, increase total sleep time, and decrease the number of nightly awakenings.

Cognitive-Behavioral Therapy

This therapy is intended to re-establish healthy sleep patterns by helping an individual cope with his or her sleep One cognitive-behavioral approach, called paradoxical intention, helps to retrain an individual's fears of sleep by doing the opposite of what is causing the anxiety. Another cognitive-behavioral technique, called thought stopping, allows a person with insomnia a certain period of time to repeatedly and continuously think about going to bed. This technique helps

"wear out" the anxiety associated with going to bed, and decreases the likelihood that he or she will obsess about falling asleep at other times.

#### Traditional Chinese Medicine

Many methods have been used historically in Traditional Chinese Medicine to treat including herbal remedies. acupuncture, Chinese massage (tui na), and qi gong. Acupuncture is considered to be the most effective.

#### Other Considerations Pregnancy

- Insomnia usually occurs in the later months of pregnancy when the mother's size and need to urinate disrupt sleep.
- Benzodiazepines should be avoided during pregnancy and while breastfeeding.

#### Warnings and Precautions

- Alcohol should be avoided in those who are taking prescription medications or OTC sleeping pills
- Discontinuing prescription medications or OTC sleeping pills can lead to rebound insomnia

**Prognosis and Complications** 

Most people who have insomnia with no underlying medical conditions tend to recover within a few weeks. For those who develop insomnia from a traumatic event, sleep disruptions can continue indefinitely. People who become dependent on sleeping pills and prescription medication for sleep often have the most difficulty overcoming insomnia.

# 86.Intestinal Parasites; Parasitic Infection

There are two main types of intestinal parasites: helminthes protozoa. Helminthes are worms with many cells. Usually, helminthes cannot multiply in the human body and will eventually clear up without infecting again. Protozoa have only one cell. They can multiply inside the human body.

Signs and Symptoms

Symptoms include the following.

- Diarrhea
- Nausea or vomiting

- Gas or bloating
- Dysentery (loose stools containing blood and mucus)
- Rash or itching around the rectum or vulva
- Stomach pain or tenderness
- Feeling tired
- Weight loss
  - Passing a worm in your stool

#### What Causes It?

 Living in or visiting an area known to have parasites

- International travel
- Poor sanitation (for both food and water)
- Poor personal cleanliness
- Age—children are more likely to get infected
- Exposure to child and institutional care centers
- Acquired immunodeficiency syndrome (AIDS)

#### What to be done

Probably have one or more of the following tests are needed:

- Fecal testing can identify both helminthes and protozoa. Stool samples must be collected before antidiarrhea drugs or antibiotics are given, or X rays with barium are taken. Three (five for pinworm) stool samples are needed to find the parasite.
- The string test is used occasionally. For this test, you swallow a string that is then pulled back up. Then samples of your stomach contents on the string are tested.
- The "Scotch tape" test identifies pinworm by placing tape around the anus at night.
- X rays with barium to diagnose more serious problems caused by parasites, although this is usually not required.

# Treatment Options Drug Therapies

Drug treatment may be just one dose or several over a period of weeks. Be careful to take the medicine just as it is prescribed or it may not work.

#### Complementary and Alternative Therapies Nutrition

- Avoid simple carbohydrates such as are found in refined foods, fruits, juices, dairy products, and all sugars.
- · Eliminate caffeine and alcohol.
- Eat more raw garlic, pumpkin seeds, pomegranates, beets, and carrots, all of which have antiworm properties. Drink a lot of water to promote good bowel elimination.
- Digestive enzymes will help restore your intestinal tract to its normal

state, which makes it inhospitable to parasites. Papain taken 30 minutes before or after meals helps kill worms. Acidophilus supplements help normalize bowel bacteria (one capsule with meals).

• Vitamin C (250 to 500 mg two times a day) and zinc (20 to 30 mg per day) support the immune system.

#### Herbs

A few of the herbs that the herbal specialist might consider include:

- Garlic (Allium sativum)
- Barberry (Berberis vulgaris)
- Goldenseal (Hydrastis canadensis)
  Homeopathy
  - Arsenicum album for foulsmelling diarrhea with a burning sensation in the abdomen and around the anus; this remedy is most appropriate for individuals who feel anxious, restless, and exhausted; symptoms tend to worsen after midnight and in the cold; symptoms improve with warmth; vomiting may also occur
  - Chamomilla for greenish, frothy stool that smells like rotten eggs; used primarily for children, especially those who are irritable, argumentative, difficult to console, and change their minds frequently
  - Calcarea carbonica for children
    who fear being in the dark or alone
    and who perspire heavily while
    sleeping; stools have a sour odor
  - for explosive, \_ Podophyllum diarrhea painless gushing, worse after eating or becomes though (even drinking individual is often thirsty and craves cold drinks); exhaustion follows bowel movements and the individual for whom this remedy is appropriate may experience painful cramps in lower extremities
  - Sulphur for irritable and weepy children; may have a red ring around the anus and diarrhea with the odor of rotten eggs

Massage
May help stimulate bowel function and elimination.

Follow up Advice the patient to avoid reinfection. Follow these instructions carefully. Getting a parasite a second time can cause more serious health problems. Special Considerations

Complications occur more often in older people and in people who already have serious illnesses, such as AIDS. Intestinal parasites can be more serious if pregnant. Tell which drugs are safe to take during pregnancy. A qualified practitioner should closely monitor treatment for intestinal parasites during pregnancy.

## 87.Irritable Bowel Syndrome; Spastic Colon (IBS)

Irritable bowel syndrome (IBS) occurs when muscles in your intestines contract faster or slower than normal. This causes pain, cramping, gassiness, sudden bouts of diarrhea, and constipation. Two types of IBS exist. In spastic colon IBS, you experience constipation, diarrhea, or both, and you often have pain after eating. Painless diarrhea IBS involves the sudden onset of diarrhea during or after meals, or upon waking. Between 10 and 20 percent of the population has IBS at some time. The syndrome often starts in adolescents or young adults. It affects three times as many women as men and is often associated with

## Signs and Symptoms

- Cramping pain in your lower abdomen
- Bloating and gassiness
- Changes in your bowel habits
- Diarrhea or constipation, or both alternately
- Immediate need to move your bowels when you wake up or during or after meals
- Relief of pain after bowel movements
- Feeling of incomplete emptying after bowel movements
- Mucus in your stool

# What Causes It?

The underlying cause remains unknown. But the syndrome has no relation to actual disease, and it does not lead to other diseases.

# What to be done

Physician will feel your abdomen to check for signs of pain. He or she will place a gloved finger in rectum to check its condition. Female may have a pelvic examination. The provider may use a sigmoidoscope to examine your lower

colon. Ask to provide three days' worth of stool samples. Provider may also want samples of blood, urine and ultrasound or X rays.

#### **Treatment Options**

Try to avoid stressful situations or foods that have triggered IBS in the past. Monthly hormonal changes and some drugs can affect your condition. Establishing regular bowel habits can be helpful.

#### **Drug Therapies**

- Anticholinergic agents—reduce the pain from bowel spasm
- Antiflatulents—reduce gas
- Antidiarrheal medication—such as Loperamide (Imodium)
- Bulk-producing agents—such as psyllium (Metamucil) and other fiber supplements can help with diarrhea or constipation.
- Melatonin is involved in the regulation of GI motility sensation and reduces associated with IBS.

#### Complementary and Alternative Therapies

reduction techniques through biofeedback, hypnosis, or counseling can help deal with stress.

#### Nutrition

- Removal of known food allergens or irritants is important. The most common food allergens are dairy products, wheat, corn, peanuts, citrus, soy, eggs, fish, and tomatoes. An elimination/challenge trial may help uncover sensitivities. Eliminate all suspected allergens from the diet for two weeks. Add back one food every three days and wait for reaction to the challenge.
- If suffer from gassiness, eliminate beans, cabbages, and other "gassy"

vegetables from your diet, as well as apple juice, grape juice, bananas, nuts, and raisins.

- Fiber supplementation can help reduce pain, cramping, and gas. Supplements include psyllium, flaxmeal, slippery elm (Ulmus fulva) powder, and marshmallow root (Althaea officinalis) powder.
  - Digestive enzymes taken minutes before meals can help enhance digestion and normalize bowel function.
  - One teaspoon of raw bran with each meal, supplemented by extra fluids, provides fiber reliably.
  - Pro-flora supplements such acidophilus and lactobacillus species taken two to three times per day can help to rebalance normal bowel bacteria and reduce gas and bloating.
  - Magnesium (200 mg two to three times per day) and B-complex (50 to 100 mg per day) with extra B5 (pantothenic acid; 100 mg per day) may help reduce the effects of stress.
- Low-fat diets may relieve abdominal pain following meals.

#### Herbs

- Enteric-coated peppermint oil: one to two capsules (0.2 ml peppermint oil per capsule) three times a day after meals
- A tea of fennel seed (Foeniculum vulgare) or ginger root (Zingiber officinale) taken after promotes good digestion
  - A tincture of equal parts of the following before meals (30 drops three times per day): valerian (Valeriana officinalis), passionflower (Passiflora incarnata), anise seed (Pimpinella anisum) extract, meadowsweet (Filipendula ulmaria), wild yam

(Dioscorea villosa), and milk thistle (Silybum marianum)

#### Homeopathy

Homeopathy may be useful as a supportive

#### Physical Medicine

- Electric heating pads, hot water bottles, and long hot baths can relieve painful spasms cramping in the abdomen.
- Regular exercise, such as walking, can reduce stress and encourage movements if you are bowel constipated.
- Castor oil pack. Apply oil directly to skin, cover with a clean soft cloth and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes.
- Abdominal breathing helps to induce the relaxation response and may aid normal physiological functioning (such as digestion).

#### Acupuncture

No firm conclusions can be drawn about acupuncture's value in treating IBS, however, until larger clinical trials are conducted. Acupuncturists treat people with IBS based on an individualized assessment of the excesses and deficiencies of qi located in various meridians. Moxibustion is frequently used for treatment of IBS because its effect is thought to reach deeper into the body.

#### Chiropractic

It is speculated that, in these cases, spinal manipulation may have a balancing effect on the nerves that supply impulses to the intestinal tract.

#### Massage

Therapeutic massage may help in reducing the effects of stress.

#### Follow up

Be aware that the syndrome itself may cause stress.

# 88. Kidney Stones; Urolithiasis, Renal Calculi

Urolithiasis is the medical term used to describe stones occurring in the urinary tract. These stones occur four times

more often in men than in women. The pain of having a stone has been compared to that of childbirth. The stones can be made of calcium, uric acid, oxalate, struvite, or cystine.

Signs and Symptoms

- Sudden onset of excruciating pain in the buttocks area
- Abdominal pain
- Nausea and vomiting
- Constantly moving to relieve the pain
- Pain in the genital area as the stone moves
- Fever and chills

## What Causes It?

Kidney stones occur because the small bowel absorbs too much calcium, diet is too high in calcium or another mineral, intestinal problems, a urinary tract infection, or an inherited disorder and may not be drinking enough fluids.

#### What to be done

If in extreme pain, may give a strong pain reliever. Then will need a urine sample to check for infection and to see if urine is acid or alkaline, which indicates the type of stone. May need to collect urine for 24 hours if this is not first stone. Provider will also take a blood sample. With time, the stone generally passes out of the body by itself. If it doesn't or if you have severe pain, bleeding, fever, nausea, or can't urinate, provider can shatter the stone with shock waves, and the smaller pieces can pass with much less pain. Only rarely is surgery needed.

# **Treatment Options**

Usually taking pain relievers and drinking at least six to eight glasses of water a day, plus one at bedtime and another during the night, enables the stone to pass more easily.

**Drug Therapies** 

Need pain medication while the stone is moving through your system. After it passes, need other drugs so that you don't form stones again. Drugs may include

Narcotics to control severe pain

 Allopurinol, 100 to 300 mg daily to control hyperuricemia

 Potassium citrate, 100 mEq tablets twice daily to raise urinary pH

 Hydrochlorothiazide, 25 to 50 mg daily for calcium type I stones

 Cellulose sodium phosphate 10 g daily for calcium type I stones; to decrease bowel absorption  Orthophosphates for calcium type III stones; to inhibit vitamin B synthesis

Surgical and Other Procedures

Surgery is recommended for patients with severe pain that does not respond to medications, for those with serious bleeding, and persistent fever, nausea, or significant urinary obstruction. If no medical treatment is provided after surgery, stones recur in 50% of patients within five years.

- Urethroscopy—a diagnostic procedure for identifying stones in lower third of ureter
  - Extra corporeal Shock Wave Lithotripsy (ESWI)—an outpatient procedure in which shock waves are used to shatter stones under 2 cm
  - Percutaneous nephrolithotripsy—a surgical procedure for removing large or dense kidney stones; instruments are inserted into the kidney to break up stones

# Complementary and Alternative Therapies

Herbs and homeopathic remedies can be used for acute pain relief and long-term toning of the urinary tract.

#### Nutrition

- Reduce your intake of sugar, refined foods, animal products (meats and dairy), caffeine, alcohol, soda, and salt.
- Drink more water and eat more fiber, vegetables, whole grains, and vegetable proteins.
- Cut down on oxalate-containing foods such as spinach, rhubarb, beets, nuts, chocolate, black tea, wheat bran, strawberries, and beans.
- Include foods rich in magnesium and low in calcium, such as barley, bran, corn, rye, oats, soy, brown rice, avocado, banana, and potato.
- Magnesium citrate (200 to 400 mg per day) may increase the solubility of calcium oxalate and calcium phosphate.
- Pyridoxine (B6, 10 to 100 mg per day) is essential for the metabolism of oxalic acid, a component of some stones.

• Folic acid (5 mg per day) helps break down uric acid stones.

#### Herbs

- For acute pain relief, combine tinctures of wild yam (Dioscorea villosa), cramp bark (Viburnum opulus), kava (Piper methysticum). and Jamaica dogwood (Piscidia piscipula). Take 15 drops every 15 minutes for up to 8 doses.
- Drink an infusion of equal parts of gravel root (Eupatorium purpureum), corn silk (Zea mays), pipissewa (Chimaphila umbellata), and kava. Use 1 tsp. of herb mixture per 1-cup water. Drink 3 to 4 cups per day.

## Homeopathy

- Berberis for sharp sticking pains that radiate to your groin
- Colocynthis for restlessness and pain that feels better when bend forward

• Ocimum for nausea and vomiting Smotgmy2 back

# **Physical Medicine**

Castor oil pack: Used externally, castor oil is a powerful anti-inflammatory. Apply oil directly to skin, cover with a clean soft cloth and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes. For best results, use for three consecutive days. Follow up

Fifty percent of patients pass the stone in 48 hours. If there are complications, physician may refer you to a urologist or admit you to the hospital. After you pass the stone, keep drinking fluids and change diet to reduce the chance of forming more stones in the future. **Special Considerations** 

Shock-wave therapy is not appropriate for women of childbearing age. He or she will also want to rule out ectopic pregnancy or a ruptured ovarian cyst.

# 89.Laryngitis

With laryngitis, the larynx and the area around it become irritated and swollen. When you have the condition, find voice changing, becoming hoarse. Unable speak above a whisper, or even lose voice entirely for a few days. Laryngitis rarely causes serious trouble in adults. But it can cause complications in children-notably croup, a swelling of the throat that narrows the airways and causes a "barking" cough.

# Signs and Symptoms

- An unnatural change in your voice
- Hoarseness
- Loss of your voice
- · Tickling, scratchiness, and rawness in your throat
- A constant urge to clear your throat
- · Fever, general feeling of lethargy and tiredness, and difficulty breathing mark more severe cases

Certain viruses or bacteria can infect the larynx, or voice box, and cause it to swell. This produces irritation and soreness, and changes your voice, making you sound

hoarse and unable to speak above a whisper, or even causing to lose voice entirely for a few days. Usually, the virus comes from another ailment, such as a cold, the flu, or bronchitis. Overuse of your voice, by screaming or shouting for long periods, can worsen the irritation and swelling produced by the infection. Smokers and people who work around fumes to which they are allergic often have chronic laryngitis.

#### Risk Factors

- Smoking Having an upper respiratory infection like a cold, flu, or bronchitis

#### Diagnosis

Examine throat and take a culture if it looks infected. Examine sinuses, neck, nose, and lungs. If laryngitis for a long time, especially if a smoker, a referral to an Ear Nose and Throat (ENT) specialist may be made for a special test called laryngoscopy. This test involves a laryngoscope to see the back of the throat including the voice box.

# Treatment Approach

Antibiotics are almost never needed since a virus causes most cases of laryngitis. If a possible bacterial infection, antibiotics might be considered.

# Lifestyle

- Try to rest voice for a week or so.
- Getting plenty of rest can also speed recovery.
- Avoid any irritants that might affect larynx, especially tobacco smoke.
- Avoid drinking alcohol.
- Gargle several times a day with 1/2 tsp. of salt in a glass of warm water.

# Medications

- Antibiotics—for laryngitis resulting from a bacterial infection
- Antihistamines—for laryngitis resulting from allergies
- Inhaled steroids—for laryngitis resulting from allergies

### **Nutrition and Dietary Supplements**

Although not without controversy, certain supplements may help reduce the length of time of cold and, therefore, its symptoms. Such supplements include:

- Vitamin C
- 0 Zinc

#### Herbs

# Barberry (Berberis vulgaris)

Barberry is used to ease inflammation and infection of the respiratory tracts including pharyngitis, sinusitis. rhinitis congestion), and bronchitis.

#### **Echinacea** (Echinacea angustifolia/Echinacea pallida/Echinacea purpurea)

Echinacea, also called purple coneflower, is used to shorten the duration of the common cold and flu and to relieve the symptoms associated with them, such as sore throat (pharyngitis), cough, and fever.

# Eucalyptus (Eucalyptus globulus)

Eucalyptus is commonly used in remedies to treat coughs and the common cold. It can be found in many lozenges, cough syrups, and vapor baths. Herbalists recommend the use of fresh leaves in teas and gargles to soothe sore throats and treat bronchitis and sinusitis.

# German Chamomile (Matricaria recutita)

Chamomile has been used traditionally to treat a range of conditions including chest colds and sore throats. While there is some

animal studies that show that chamomile may reduce inflammation, there are few studies on people to test such uses.

# Goldenrod (Solidago virgaurea)

Herbalists to treat sore throats and larvngitis have used goldenrod traditionally.

#### Goldenseal (Hydrastis canadensis)

Goldenseal in herbal remedies used for hav fever (also called allergic rhinitis), colds. and flu. It is also available in mouthwashes for sore throats and canker sores.

### Licorice (Glycyrrhiza glabra)

Licorice is a flavorful herb that has been used in food and medicinal remedies for thousands of years. As an herb, herbalists to relieve respiratory ailments, such allergies, bronchitis, colds, and sore throats, have long used it. It can be used as a lozenge or tea.

# Marshmallow (Althea officinalis)

Marshmallow-the herb, not the white puffy confection roasted over a campfirehas been used for centuries as both a food and a medicine. The mucilage, or gummy secretion, in the leaves and particularly in the root may be helpful for soothing sore

## Peppermint (Mentha x piperita)

Peppermint and its active agent, menthol, may feel soothing and calming for sore throat.

#### Saw Palmetto (Serenoa repens/Sabal serrulata)

Early in the 20th century, saw palmetto was listed in the US Pharmacopoeia as an effective remedy bronchitis for laryngitis, among other conditions.

### Slippery elm (Ulmus fulva)

Slippery elm has received as a safe and effective option includes sore throat and respiratory symptoms, such as cough.

#### Other

Other herbs that may reduce cold symptoms including, possibly, sore throat include:

- Garlic (Allium sativum)
- Ginger (Zingiber officinale)

#### Homeopathy

- Aconitum for laryngitis that comes on after exposure to cold and may be accompanied by a dry cough
- Allium сераfor hoarseness associated with a cold and clear, watery discharge

- Argenticum nitricum— for laryngitis in nervous, restless individuals that may be brought on by yelling or singing
- Causticum— most commonly used remedy for individuals who have laryngitis, particularly with mucus in the throat or laryngitis due to overuse of the voice; coughing is aggravated by chilly weather and relieved by cold drinks; symptoms worsen at night
- Hepar sulphuricum— for laryngitis with barking cough that worsens in the morning
- Kali bichromicum— for laryngitis with a cough that is characterized by a stringy yellow mucus; this remedy is most appropriate for individuals who have a tickling sensation in the back of the throat with symptoms that worsen after drinking

Phosphorus—for individuals with a hoarse, dry cough and a burning sensation in the throat; symptoms tend to be relieved by cold liquids; this remedy is most appropriate for individuals who tend to be nervous if alone and prefer the company of others

# **Prognosis and Complications**

For adults, laryngitis rarely causes serious problems. Two conditions that may occur in children, however, include:

- Croup which narrows the airway passages, causes difficulty breathing, and leads to a "barking" cough
- Epiglottitis, which inflammation of the epiglottis. The epiglottis is the flap of cartilage at the back of the tongue that closes off windpipe when swallowing. If it swells, breathing can be come obstructed.

# 90.Leukemia

Leukemia is a type of cancer in which produces large numbers the body abnormal blood cells. Approximately 28,500 new cases of leukemia are diagnosed each year. There are several types leukemia. grouped as either acute chronic. The most common leukemias are:

- Acute lymphocytic (ALL), which comprises 90 percent of all leukemias in children (although it also occurs in adults)
- Acute myelocytic leukemia (AML), which mostly occurs in adults
- Chronic lymphocytic leukemia (CLL), which mostly strikes adults over age 55
- Chronic myelocytic leukemia (CML), which mostly occurs in adults

# Signs and Symptoms

Leukemia is often accompanied by the following signs and symptoms.

- Fatigue .
- Fever .
- Abnormal paleness

- Weight loss
- . Shortness of breath
- Easily bruising
- Bleeding .
- Repeated infections
- Bone pain
- Abdominal pain

#### What Causes It?

Most causes of leukemia are not known. However, the disease has been linked to exposure to large amounts of high-energy nuclear radiation (from occupational exposure to the chemical benzene, viral infections, and chemicals from cigarettes.

### Who's Most At Risk?

- Increasing age
- Genetic diseases, such as Fanconi's anemia or Down syndrome
- such diseases, Acquired Hodgkin's disease
- First-degree relative with leukemia
- ionizing to Excessive exposure radiation

- Chemical exposure (benzene)
- Certain drugs
- Chromosomal abnormalities
- Cigarette smoking

# What to be done

Do a physical examination, checking for swelling in the liver, the spleen, and the lymph nodes, and will order certain laboratory tests. The bone marrow is examined to check for leukemia cells or to determine the type of leukemia. A lumbar puncture ("spinal tap") checks for leukemia cells in the fluid around the brain and spinal cord, and chest X rays can reveal signs of the disease in the chest.

# Treatment Options Prevention

Avoiding exposure to benzene, nicotine, or radiation can prevent some leukemia's.

#### Treatment Plan

Leukemia is an extremely complex disease. Treatment depends on the type of leukemia, certain features of the leukemic cells, the extent of the disease, and whether the leukemia has been treated before. Whenever possible, a patient with leukemia should be treated at a medical center that specializes in this disease.

# **Drug Therapies**

- Radiation therapy— the use of high energy rays to kill cancer cells and prevent them from growing
- Chemotherapy—the use of drugs to kill cancer cells
- Bone marrow transplantation—a procedure in which cancerous bone marrow is destroyed with high doses of anticancer drugs or radiation, and is then replaced with healthy bone marrow.
- Biological therapy—stimulates or restores ability of the body's immune system to fight infection and disease; may also be used to lessen side effects caused by other treatments

# Surgical and Other Procedures

- Lumbar puncture
- Bone marrow transplant
- Splenectomy (removal of the spleen)

# Complementary and Alternative Therapies

A comprehensive treatment plan for leukemia may include a range of complementary and alternative therapies.

#### Nutrition

Eating the following nutrient-dense foods that are high in antioxidants may help protect against cancer: dark berries, orange and yellow vegetables, dark leafy greens, fresh vegetable juices containing wheatgrass, beets, romaine lettuce, parsley, and cucumber. Potentially beneficial nutrient supplements include those listed below.

- Vitamin A (25,000 IU a day), vitamin E (800 IU a day), vitamin C (3 to 6 g a day), and selenium (200 to 400 mcg a day) have antioxidant activity and may decrease side effects of chemotherapy and radiation
- Vitamin D (400 to 800 IU a day) may help promote differentiation of cells
- B-complex (50 to 100 mg a day) with additional B<sub>12</sub> (1,200 mcg a day) and folic acid (800 mcg a day) for anemia

#### Herbs

The use of herbal remedies may support the lymphatic system, spleen, bone marrow, and liver. A combination of the following herbs in equal parts, 30 to 60 drops three times a day.

- Red clover (Trifolium pratense)
- Blue flag (Iris versicolor)
- Yellowdock (Rumex crispus); for late-stage disease, substitute greater celandine (Chelidonium majus) for yellowdock
- Poke root (Phytolacca americana)
- Tree of life (Thuja occidentalis)
- Cleavers (Galium aparine)
  - Coneflower (Echinacea purpurea)
  - Turmeric (*Curcuma longa*) (250 to 500 mg two to three times a day)
  - Periwinkle (Vinca rosea) and autumn primrose (Colchicum officinale). Note: these are potentially toxic herbs to consider for use only under supervision.

### Homeopathy

An experienced homeopath can prescribe a regimen for treating leukemia

### Acupuncture

Chinese herbs and acupuncture may be a powerful adjunct to conventional therapy.

## **Prognosis/Possible Complications**

Repeated infections complicate most cases of leukemia. Kidney failure or impaired function and a decreasing number of neutrophils are also common complications. Treatments for leukemia can have serious side effects. ALL patients have the best

prognosis, with a 35- to 45-percent five-year survival rate and a 40-percent long-term survival rate.

### Follow up

Patients with leukemia undergo extensive follow-up care, including daily exams to check for infections and bleeding, weekly bone marrow biopsies after chemotherapy has begun, post-remission chemotherapy, treatment for central nervous system conditions, and monitoring of urinary function.

# 91.Low Back Pain; Back Pain, Low

Low back pain affects 60 to 80 percent of the adult Indian. Population at one time or another. Low back problems affect the spine's flexibility, stability, and strength, which can cause pain, discomfort, and stiffness.

# Signs and Symptoms

- Tenderness, pain, and stiffness in the lower back
- Pain that radiates into the buttocks or legs
- Difficulty standing erect or standing in one position for a long time
- Discomfort while sitting
- Weakness and leg fatigue while walking

#### What Causes It?

Low back pain is usually caused by strain from lifting, twisting, or bending. However, some low back pain can be a symptom of a more serious condition, such as an infection, a rheumatic or arthritic condition, or ovarian cysts. It may be caused by a ruptured or bulging disk, the strong, spongy, gel-filled cushions that lie between each vertebra. Compression fractures of the bones in the spine can also cause low back pain. older especially in women addition, poor overall osteoporosis. In fitness, smoking, and general dissatisfaction increase a person's risk for low back problems.

# What to be done

Ask to stand, sit, and move and check reflexes and perhaps response to touch, slight heat, or a pinprick. Recommend strength testing on a treadmill. Need a blood

test, X rays, a magnetic resonance imaging scan, or computed tomography.

## **Treatment Options**

In general, low back pain can be relieved and prevented with lifestyle changes. Exercising to strengthen maintaining a healthy weight, and practicing good posture may be lowers risk. Learning to bend and lift properly, sleeping on a firm mattress, sitting in supportive chairs, and wearing supportive shoes are important factors. For long-term back pain, may medications recommend stronger surgery.

### **Drug Therapies**

- Nonsteroidal anti-inflammatory drugs (NSAIDS)—ibuprofen, can help relieve pain
- Muscle relaxants
- Oral or epidural steroids—reduce inflammation

Complementary and Alternative
Therapies

Alternative therapies can be effective for easing muscle tension, correcting spinal imbalances, relieving discomfort, and averting long-term back problems by improving muscle strength and joint stability.

### Nutrition

B-complex: B1 (50 to 100 mg), B2 (50 mg), B3 (25 mg), B5 (100 mg), B6 (50 to 100 mg), B12 (100 to 1,000 mcg), folate (400 mcg per day) are all reduced with stress and pain.

- Vitamin E (400 IU per vitamin C (250 to 500 mg twice daily)
- Calcium (1,500 to 2,000 mg) and magnesium (700 to 1,000 mg) to regulate muscle contraction and ease spasm
- Bromelain: (250 to 500 mg three times per day on an empty stomach) anti-inflammatory, works especially well with turmeric

#### Herbs

- Relaxants: Black haw (Viburnum prunifolium) relaxant; petasites (Petasites hybridus), acute muscle spasm, not for long-term use; valerian (Valeriana officinalis), antispasmodic, especially with sleeplessness; wild yam (Dioscorea villosa), antispasmodic, especially with joint pains and long-term stress; turmeric anti-inflammatory, especially with digestive problems; (Piscidia Jamaica dogwood piscipula), relaxant
- Pain relief: White willow bark (Salix alba), anti-inflammatory and analgesic; devil's (Harpagophytum procumbens), analgesic, anti-inflammatory; St. wort (Hypericum perforatum), anti-inflammatory
- Circulatory stimulants: rosemary leaves (Rosmarinus officinalis), especially with digestive problems; gingko (Ginkgo biloba), especially with poor circulation
- Topical treatment may be helpful for acute problems. Mix 1 to 2 drops of essential oil or 5 to 10 drops of tincture into 1 tbsp. vegetable oil, and rub into the affected area. St. John's wort for nerve pain; leopard's bane (Arnica montana) anti-inflammatory, external use only; lobelia (Lobelia inflata) antispasmodic

# Homeopathy

- · Aesculus for dull pain with muscle weakness
- Arnica montana especially with pain as a result of trauma

- Colocynthis for weakness cramping in the small of the back
- Gnaphalium for sciatica that alternates with numbness
- Lycopodium for burning especially with gas or bloating
- Rhus toxicodendron for stiffness and pain in the small of the back

- Physical Medicine

   Chiropractic or osteopathic manipulation can help relieve pain.
  - Contrast hydrotherapy. Alternate hot and cold applications. Alternate three minutes hot with one-minute cold. Repeat three times to complete one set. Do two to three sets per
- Castor oil pack. Apply oil directly . to skin, cover with a clean soft cloth and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes. Do this for three consecutive days.

## Acupuncture

Treating low back pain with acupuncture can be complex because many meridians (including the kidney, bladder, liver, and gallbladder) affect this area of the body. Local treatment to the painful areas and related sore points is often performed as well, with needles and moxibustion

#### Chiropractic

Spinal manipulation is among the most extensively studied and accepted forms of treatment for acute low back pain. Spinal manipulation also appears to be effective for chronic low back pain, but the evidence is less conclusive.

#### Massage

Massage may be helpful both acutely and to prevent chronic problems.

#### **Special Considerations**

Chronic low back problems can interfere with everyday activities, sleep, concentration. When symptoms are severe, mood and sexuality may be affected. While depression is usually not the cause of chronic low back pain, it often complicates

Lung cancer is the most common cause of cancer death. There are two major types: non-small cell lung cancer and small cell lung cancer, so named because of how the cells look under a microscope. Nonsmall cell lung cancer is more common, and it generally grows and spreads more slowly. There are three main types of non-small cell lung cancer, named for the type of cells in which the cancer develops: squamous cell carcinoma, adenocarcinoma, and large cell lung cancer. Small cell lung cancer grows more quickly and is more likely to spread to other organs in the body.

## Signs and Symptoms

- A persistent cough that gets worse over time
- Constant chest pain
- Coughing up blood
- Shortness of breath, wheezing, or hoarseness
- Repeated pneumonia or bronchitis
- Swelling of the neck and face
- Loss of appetite or weight loss
- Fatigue

#### What Causes It?

Multiple exposure to carcinogens results in damage to DNA in the cells of the body.

#### Who's Most At Risk?

Tobacco smoke is the biggest carcinogen, responsible for 85 percent of all lung cancers. Risk increases with the amount of tobacco used, and the amount of time it has been used. Non-smokers exposed to tobacco smoke are also at risk for developing lung cancer. Other risk factors include the following.

- . Family history
- Environmental and occupational exposure to certain substances, including arsenic, asbestos, ether, chromium, nickel, and radon
- Exposure to excessive radiation
- Lung diseases
- · Poor diet (however, diets high in fruits and vegetables can decrease risk)

# What to be done

Take medical history, smoking history, and exposure to environmental and occupational substances, and family history of cancer, and will perform a physical exam. Sent for a chest X ray and other tests. These include sputum cytology, the microscopic examination of cells obtained from a deepcough sample of mucus in the lungs. A biopsy can confirm whether you have cancer. If cancer is present, want to learn the stage (or extent) of the disease to find out whether the cancer has spread, particularly to the brain or bones, using tests such as computed tomography (CT) scan, magnetic resonance imaging (MRI), radionuclide scan, and bone scan.

# **Treatment Options**

#### Prevention

The best means of prevention is to never start smoking or using chewing tobacco, or to stop using tobacco products. A healthy diet is an important part of prevention.

#### Treatment Plan

A treatment plan depends on the cell type, stage of disease, possibility for removing the tumor, and the patient's ability to survive surgery.

# **Drug Therapies**

- Chemotherapy can control cancer growth and relieve symptoms.
- Photodynamic therapy involves the use of a chemical that is injected into the bloodstream and absorbed by cells all over the body, and which remains in cancer cells for a longer time. A laser light activates the chemical, which then kills the cancer cells. Photodynamic therapy may be used to control bleeding, relieve breathing problems, or to treat very small tumors.

# Surgical and Other Procedures

Surgery is the only treatment that offers hope of a cure of non-small cell lung cancer. Removal of a small part of the lung is a segmental or wedge resection, removal of an entire lobe of the lung is a lobectomy, and removal of an entire lung pneumonectomy. Radiation therapy is used before surgery to shrink a tumor, or after surgery to destroy remaining cancer cells. Radiation therapy may also be used instead of surgery or to relieve symptoms such as shortness of breath.

Complementary and Alternative

Therapies Nutrition

Include in diet dark green, yellow, and orange vegetables, as well as dark berries, green tea, onions, garlic, broccoli, brussels sprouts, kale, and cabbage. Increase whole grains and anti-inflammatory oils (nuts, seeds, and cold-water fish). Eliminate refined foods, sugar, alcohol, and saturated fats (animal products, especially dairy).

Potentially beneficial nutrient supplements include the following.

- Vitamin C (250 to 500 mg twice per day), vitamin E (400 IU twice per day), selenium (200 mcg twice a day), zinc (30 mg per day), and coenzyme Q10 (100 mg three times per day)
- Avoid vitamin A (and beta carotene) supplements if you have a history of alcohol or nicotine abuse.
- Coenzyme Q10 and L-carnitine (600 mg three times per day) can reduce toxicity from certain chemotherapies.
- Anti-inflammatory omega-3 and omega-6 oils (1,500 mg three times per day)
- Glutathione (500 mg twice a day)
- N-acetylcysteine (200 mg three times per day)
- Melatonin (10 mg per day) may improve survival rate in non-small cell lung cancer patients who do not respond to a type of medication called cisplatin
- Bromelain (250 to 500 mg between meals)

# Herbs

- Turmeric (Curcuma longa) 500 mg four times a day
- Quercetin (250 to 500 mg three to four times a day)
- Ginkgo (Ginkgo biloba) 120 mg standardized extract twice a day to reduce toxicity of certain chemotherapies
- To help your body's immune system and support healthy lung tissue, combine equal parts of red clover (Trifolium pratense), gotu kola

(Centella asiatica), mullein (Verbascum densiflorum), elecampane (Inula helenium), Indian tobacco (Lobelia inflata), and blood root (Sanguinaria canadensis). Take 30 to 60 drops tincture three to four times a day, or drink one cup of tea three times a day

• Herbal mixes containing burdock root (Arctium lappa), sheep sorrel (Rumex acetosella), slippery elm (Ulmus fulva), turkey rhubarb (Rheum palmatum), and other herbs: for brand name products, follow dosing instructions on the product labeling

#### Homeopathy

Homeopathy may help reduce symptoms, relieve side effects from treatments, and reduce the effects of stress.

#### **Physical Medicine**

Castor oil pack over lungs may decrease side effects of chemotherapy and aid the lungs in detoxification. Saturate a cloth with castor oil and apply directly to the skin, placing a heat source (heating pad or water bottle) on top. Leave in place for 30 minutes or more. For best results, use castor oil packs for three to four consecutive days per week. Packs may be used daily.

#### Acupuncture

There have also been studies indicating that acupuncture may help reduce pain and shortness of breath. Acupressure has also proved useful in controlling breathlessness; this is a technique that patients can learn and then use to treat them.

### **Prognosis/Possible Complications**

The outlook varies by cell type and stage of the disease. In general, the prognosis is better for squamous cell cancers than for adenocarcinomas. Early detection is key to better chances of survival.

#### Follow up

Periodic follow-up is useful in helping to detect recurrence of the lung cancer or other smoking-related cancers. Frequent follow-up and rehabilitation for loss of lung function from cancer, surgery, or other treatment may be necessary.

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Lyme disease is the most common tick-borne disease, with approximately 16,000 new cases reported each year. The disorder was first identified in 1975 when a group of children in Lyme, Connecticut, experienced mysterious arthritis-like symptoms. The deer tick carrying the bacterium *B. burgdorferi* is responsible for the spread of the disease. The disease is also on the rise in large areas of Asia and Europe.

# Signs and Symptoms

- Red rash that appears within a few weeks of a tick bite, initially as a small red spot at the site of the bite. The spot expands over time, forming a circle or oval and sometimes resembling a bull's eye. The rash can range in size from that of a dime to the entire width of a person's back. As the infection spreads, rashes can appear at different places on the body.
- Flu-like symptoms—fever, headache, stiff neck, body aches, and fatigue.
  - Arthritis—60 percent of people not treated with antibiotics develop recurring attacks of arthritis, most commonly in the knees that last a few days to a few months. About 10 to 20 percent of untreated individuals will develop ongoing arthritis.
- Neurological symptoms—stiff neck and severe headache (may indicate meningitis), temporary paralysis of muscles in the face (Bell's palsy), numbness, pain or weakness in the limbs, or poor motor coordination. Symptoms can develop weeks, months, or even years following an untreated infection, and can last for weeks or months. Symptoms usually resolve completely, but they may recur.
  - Heart problems—heart abnormalities such as palpitations, lightheadedness, fainting, chest pain, and shortness of breath are uncommon. Symptoms may appear

several weeks after infection and last a few days or weeks.

#### What Causes It?

*Ixodes* ticks carrying the bacterium *B. burgdorferi* bite people. The bacteria enter the skin at the site of the bite, after the infected tick has been in place 36 to 48 hours. Symptoms are primarily due to the body's response to this invasion.

## Who's Most At Risk?

- Environment: exposure to heavily wooded areas
- Season: infection is most likely during the summer and fall
- Age: most common in children and young adults
- Location: 90 percent of cases occur in the coastal northeast.

#### What to be done

Consider risk factors and will check blood for antibodies against *B. burgdorferi* to confirm the presence of the bacterium. A spinal tap may be performed to detect brain and spinal cord inflammation and to examine antibodies or genetic material of *B. burgdorferi* in the spinal fluid.

# Treatment Options

Prevention

areas, Avoid heavily wooded protective clothing, and apply tick repellant. Wear light-colored clothing (which makes detect), do a careful ticks easier to inspection of body after outdoor activities in wooded or grassy areas, and, if ticks are found, remove them with tweezers. New evidence suggests that it may even be disease if Lyme possible to prevent antibiotics are administered within 3 days of a tick bite. A vaccine is recommended for those who live, travel, or work in areas where Lyme disease is prevalent. Studies indicate that the vaccine is about 80% effective.

## **Drug Therapies**

Antibiotics, such as amoxicillin, doxycycline, cefuroxime, or erythromycin; in the case of neurological symptoms, ceftriaxone or penicillin is used

 Nonsteroidal anti-inflammatory drugs (NSAIDs) for relief of symptoms

Complementary and Alternative Therapies

Chiropractic therapy may help relieve pain, make more mobile, and improve range of motion.

### Nutrition

- Fatty acids that reduce inflammation (such as borage and fish oils)
- Mitochondrial nutrients (such as carnitine and alpha-lipoic acid), which boost energy; these supplements may also help with cognitive functions such as focused thinking and memory
- Cognitive enhancements, such as coenzyme Q10, used to increase blood flow to the brain
- Nutrients that support your adrenal gland (such as vitamin C, vitamin B<sub>6</sub>, and pantothenic acid)
- Calcium/magnesium supplements for muscle pain and spasm
- Extra magnesium (30 to 420 mg a day, depending on age and gender) and malic acid (found in apples, pears, and other fruits, and used as a food additive), when muscle pain is your primary symptom
- Low levels of vitamin A may increase arthritic inflammation caused by Lyme disease; although not known definitively, taking vitamin A may improve these symptoms
- Probiotics, such as Lactobacillus acidophilus; if antibiotics are taken, suggest this to help maintain or

restore normal levels of beneficial microorganisms in the intestines

#### Herbs

- Ginkgo (Ginkgo biloba) may help reduce cognition (thinking, learning, memory) problems, and valerian (Valeriana officinalis) may help with any accompanying anxiety.
  - Case studies suggest that Chinese herbal formulas may be effective in people with Lyme disease who don't respond to antibiotics.

### Homeopathy

- Arsenicum album
- Carcinosin
- Lac canimum
- Ledum
- Mercurius
- Syphilinum
- Thuja

## Acupuncture

Acupuncture may help relieve pain, increase mobility, and reduce fatigue. Chinese herbal formulas, used by many acupuncturists, may help resolve joint, muscular, and neurological symptoms from *B. burgdorferi* infection after many courses of antibiotics.

### Massage

Massage therapy may help relieve muscle pain and increase mobility as part of a physical therapy program.

#### **Prognosis/Possible Complications**

The long-term prognosis for most patients treated with antibiotics is excellent. Delay in treatment can result in complications.

#### Follow up

If a severe and advanced case of Lyme disease with varied symptoms, may want to see regularly.

# 94.Lymphomas

Lymphomas are cancers that develop in the lymphatic system—the tissues and organs that produce, store, and carry white blood cells. The lymphatic system includes the bone marrow, spleen, thymus, and lymph nodes and a network of thin tubes that carry lymph and white blood cells into all the tissues of the body. Types

of lymphoma include non-Hodgkin's, Hodgkin's, and cutaneous T-cell lymphoma. In non-Hodgkin's lymphoma, the most common form of the disease, cells in the lymphatic system become abnormal. They divide and grow without any order or control, or old cells that should die, don't. Non-Hodgkin's can begin and/or spread to almost any part of the body. In Hodgkin's

disease, cells in the lymphatic system also become abnormal, but the cancer tends to spread in a fairly orderly way from one group of lymph nodes to the next. Eventually, it can spread almost anywhere. cutaneous T-cell lymphoma, lymphocytes become cancerous, causing skin problems.

# Signs and Symptoms

Lymphoma is accompanied by the following signs and symptoms, by type.

Non-Hodgkin's and Hodgkin's:

- Painless swelling in lymph nodes in neck, underarm, or groin
- Unexplained fever
- Drenching night sweats
- Tiredness
- Unexplained weight loss
- Itchy skin

# Cutaneous T-Cell:

- Itchiness
- Dark patches on skin
  - Tumors on skin (mycosis fungoides)
- Skin infections

#### Who's Most At Risk?

People with the following conditions or characteristics are at risk for developing lymphoma, by type: Non-Hodgkin's:

- Congenital immunodeficiency
- Infections-Epstein-Barr virus (EBV), Helicobacter pylori, Kaposi's sarcoma herpes virus (HIV-related lymphoma), human Tcell leukemia virus type 1
- Immunosuppressive therapy following organ transplant
- Autoimmune diseases
- Prior chemotherapy or radiation exposure or therapy
- Exposure to certain chemicals or solvents

### Hodgkin's:

- Viruses-EBV, mononucleosis, HIV
- Tonsillectomy
- Genetic predisposition
- Whites more likely than blacks
- Men more likely than women
- Same-sex siblings—10 greater risk

### Cutaneous T-Cell:

- Human T-cell leukemia virus type 1
- Exposure to certain chemicals or

## What to be done

Carefully check for swelling or lumps in the neck, underarms, and groin. If the lymph nodes don't feel normal, a biopsy will be performed. The doctor will remove a small piece of the lymph node—or, in the case of cutaneous T-cell lymphoma, a growth from the skin—and a pathologist will examine the tissue under a microscope to check for cancer cells. If cancer is present, more tests will be done to find out if the cancer has spread to other parts of the body. This may involve blood and bone marrow tests, CT scans, and, possibly, a laparotomy, in which the doctor cuts into the abdomen and checks the organs for cancer.

# **Treatment Options** Treatment Plan

A treatment plan will be based on the diagnosis, the stage of the disease, the size of the tumor, and general health and age.

# **Drug Therapies**

Hodgkin's and Non-Hodgkin's:

- Radiation therapy
- Chemotherapy, possibly with alpha interferon

#### Cutaneous T-Cell:

- topical Emollients, moisturizers, steroids
- Chemotherapy
- Electron beam therapy
  - Retinoids and interferon

## Surgical and Other Procedures

Bone marrow transplantation and peripheral cell transplantation blood stem performed. sometimes Radioimmunotherapy, which is treatment with a radioactive substance that is linked to an antibody that will attach to the tumor when injected into the body, is being tested in clinical trials. Surgical removal of the tumor may also be performed.

Alternative Complementary and **Therapies** 

Improved relaxation and decreased stress, through such activities as guided imagery, tai chi, yoga, and meditation are helpful in promoting a sense of well-being. Intimacy and support from others helps promote a positive and empowering attitude.

Nutrition

Eat only organically-raised foods and foods that support detoxification, immunity, and are high in antioxidant nutrients, such as beets, carrots, artichokes, yams, onions, garlic, dark leafy greens, yellow and orange vegetables, shiitake mushrooms, green tea, and filtered water. Avoid refined foods, sugar, alcohol, caffeine, and saturated fats. Potentially beneficial nutrient supplements include the following.

- Vitamin C (250 to 500 mg twice per day), vitamin E (400 IU twice per day), beta carotene (50,000 IU one to two times per day), coenzyme Q10 (100 mg three times per day), and zinc (30 mg per day)
- Coenzyme Q10 and L-carnitine (600 mg three times per day) may reduce toxicity from chemotherapy
- Selenium (200 mcg twice per day) and glutathione (500 mg twice per day) may reduce toxicity from chemotherapy
- B-complex (50 to 100 mg) for stress
- Juicing: In a juicer, combine equal parts romaine lettuce, green pepper, celery, parsley, cucumber, and apple or pear (for flavor). Use organic fruits and vegetables. Drink one glass per day.

#### Herbs

- Commercial Hoxsey-like formulas or trifolium compounds (60 drops two to three times per day for six months or longer)
- Scudder's Alterative Compound: combine equal parts of corydalis tubers (*Dicentra Canadensis*), black tag alder (*Alnus serrulata*), mayapple root (*Podophyllum*

peltatum), figwort (Scrophularia nodosa), and yellowdock (Rumex crispus). Take 30 to 40 drops tincture three to four times per day for six months.

 Essiac or Flor-Essence (drink one cup tea twice per day or take 2 tbs. formula twice per day for six months)

### Homeopathy

Homeopathy may help reduce symptoms and strengthen overall constitution and may help decrease the side effects of chemotherapy.

# Physical Medicine

Contrast hydrotherapy may help enhance immune function and facilitate the transport of nutrients and waste products. End hot showers with one to two minutes of coldwater spray.

#### Acupuncture

Acupuncture may help strengthen immunity and detoxification. It may also reduce the side effects of chemotherapy.

### **Prognosis/Possible Complications**

Prognosis varies depending on the type and stage of lymphoma. Survival rates for Stage I and II non-Hodgkin's lymphoma and Hodgkin's lymphoma are very high. Complications include following: the Hodgkin's sometimes develops into non-Hodgkin's lymphoma; radiation chemotherapy can cause secondary cancers; infections and pulmonary fibrosis occur.

#### Follow up

Once in remission, it is essential that be checked for signs of relapse on a regular basis.

# 95.Macular Degeneration

Macular degeneration is a painless, degenerative eye disease. It is the leading cause of legal blindness in persons over the age of 55. While complete blindness does not occur in most people with the disorder, macular degeneration often interferes with reading, driving, or performing other daily activities. There are two forms of macular degeneration. Dry macular degeneration

affects about 90% of those with the disease and causes gradual loss of central vision, initially only in one eye. Wet macular degeneration, which accounts for 90% of all severe vision loss from the disease, involves a very sudden loss of central vision.

# Signs and Symptoms

Slightly blurred vision

• Dry type: a blurred spot in the central field of vision, which may become larger and darker

Wet type: straight lines that appear wavy and the rapid loss of central vision: sometimes, wet degeneration starts with a sudden blind spot

#### What Causes It?

Dry macular degeneration occurs from the breakdown of the light sensitive cells in the center of the retina, called the macula. Wet macular degeneration occurs when new blood vessels behind the retina grow toward the macula and leak blood and fluid.

#### Who's Most At Risk?

- Age—the risk increases with age
- Cigarette smoking
- Family history of macular degeneration
- Cardiovascular disease
- Elevated levels of cholesterol
- Light eye color
- Excessive exposure to sunlight

#### What to be done

- Testing with an eye chart to measure your ability to see at various distances.
- Pupil dilation-drops are placed in eyes to widen the pupils and reveal more of the retina.
- Checking for presence of drusen (tiny yellow deposits in the retina).
- Testing with Amsler's grid, which involves covering one eye and staring at a black dot in the center of a checkerboard-like grid. If straight lines in the pattern appear wavy or some of the lines appear to be missing, these may be signs of wet macular degeneration.
- Fluorescein angiography—a special dye is injected into a vein in the arm and pictures are taken as the dye passes through the blood vessels in the retina.

# **Treatment Options** Prevention

If wet macular degeneration, test the eyes daily at home using an Amsler's grid. Report any distortion immediately to reduce the of vision loss. Other preventive risk measures include increasing dietary intake flavonoids and carotenoids, of

ultraviolet eye protection, replacement therapy, and moderate red wine

## Treatment Plan

There is no known cure for macular degeneration; however, there are procedures that can help slow vision loss.

## Drug Therapies

- Tissue plasminogen activator (tPA)
- Thalidomide (an investigational therapy)

# Surgical and Other Procedures

- Laser surgery—a high-energy beam of light is aimed directly at the leaking blood vessels to seal them off
- Photodynamic therapy photosensitized tissue is irradiated with a low-powered laser light
- Vitrectomy—removes formed blood vessels and blood underneath the retina if performed within 7 days of bleeding

#### Complementary and Alternative **Therapies** Nutrition

Antioxidants that protect retina-such as carotenoids, selenium, zinc, and vitamins C and E-may either delay the progression of macular degeneration if you already have condition or prevent eve development of this serious eye disorder. Two particular carotenoids, lutein and zeaxanthin, may be particularly beneficial. Antioxidants can be obtained from foods or supplements. Eating a diet high in vitamins C and E and carotenoids is likely all that you need to lower chances of developing macular degeneration in the first place. Vegetables rich in carotene include orange and yellow squash, and dark, leafy greens, as kale, collards, spinach, watercress. The following are suggested amounts of key nutrients:

- 25,000 to carotenoids, Mixed 50,000 International Units (IU) a day
- The carotenoid lutein, 5 milligrams (mg) a day
- Selenium, 200 to 500 micrograms (mcg) a day
- Zinc, up to 50 mg a day
- Vitamin C, 60 to 2000 mg a day in divided doses; doses over 1000 mg

a day may cause gastrointestinal problems, including nausea and diarrhea

• Vitamin E, 50 to 1000 IU a day (usually 400 to 800 IU a day)

Flavonoids (such as quercetin, rutin, and resveritrol) may also play a role in preventing macular degeneration. Red wine is high in certain flavonoids (including quercetin, rutin, and resveritrol) that have antioxidant activity; damage from oxidative stress is thought to contribute to the development of macular degeneration. Dark berries, such as blueberries, blackberries, and dark cherries, are high in flavonoids as

Omega-3 fatty acids may also offer some protection against macular degeneration. Those with a proper ratio of omega-3 to omega-6 fatty acids and higher intake of fish in their diets were less likely to have this particular eye disorder. Consuming docosahexaenoic acid (DHA) eicosapentaenoic acid (EPA), two types of omega-3 fatty acids found in fish, four or more times per week may reduce the risk of developing macular degeneration. Alphalinolenic acid (ALA; another type of omega-3 fatty acid) may actually increase the risk of this eye condition.

#### Herbs

Ginkgo (Ginkgo biloba), which contains flavonoids, may help halt or lessen some retinal problems. Clinical studies suggest that it may be useful in treating vision problems specifically due to macular degeneration. If use anticoagulants, do not use ginkgo without close monitoring by physician.

Bilberry (Vaccinium myrtillus) and grape seed (Vitis vinifera) are also high in flavonoids; therefore, they may help prevent and treat macular degeneration. Clinical studies suggest that these herbs may stop vision loss and improve visual sharpness. Here are the recommended doses:

- Ginkgo standardized to 24%, 120 mg once or twice a day
  - Bilberry extract standardized to 25%, 120 to 240 mg twice a day
- Grape seed, 50 to 150 mg once or twice a day

#### Acupuncture

Study showed a connection between low blood flow to the head and macular degeneration. Restoring normal blood pressure with acupuncture improved vision.

**Prognosis/Possible Complications** 

Blindness is a possible outcome of macular degeneration. Low vision aids may help if you have partial blindness. Sometimes blood vessels build up underneath the retina, causing the retina to become detached or scarred. If this happens, the chances of preserving central vision are poor. This condition, called subretinal neovascularization, occurs in about 20% of cases of age-related macular degeneration. The condition will likely recur even after laser treatment.

#### Follow up

Will see the patient regularly to monitor vision and eye health.

# 96.Measles (Rubeola)

Measles (rubeola) is a highly contagious viral infection—so contagious that 90% of people exposed to it, who are not immune, will develop the disease. However, there are still an estimated 30 million cases of measles worldwide each year, resulting in 888,000 deaths.

Signs and Symptoms

Measles is associated with the following signs and symptoms:

- Malaise
- Moderate to high fever
- Conjunctivitis (red, irritated eyes)
- Cough

- Sore throat; hoarseness
- Runny nose
- Red spots with bluish-white centers, called Koplik's spots, on the inside of the mouth
- Red blotchy rash, which begins on the face and then spreads
  - Diarrhea
  - Vomiting
  - Enlarged lymph nodes

Rarely (1 in 1000 cases), extreme drowsiness, seizure, or coma, suggesting involvement of the central nervous system

### What Causes It?

Measles is caused by a virus (paramyxovirus) that is spread through the air or by contact with infectious droplets from the nose, mouth, or throat. The disease is so contagious that it's possible to contract it by merely being in the same room as an infected person. Most people get measles because they were never immunized. Once someone has had measles, that person is immunized for life.

#### Who's Most At Risk?

People with the following conditions or characteristics are at risk for developing measles:

- Impaired immunity caused by a congenital immunodeficiency, the human immunodeficiency virus (HIV), or certain drugs suppress the immune system (for example, cancer chemotherapy medicines)
  - Infants less than 1 year of age (too young to be immunized)
  - Other children and adults who have not been immunized or who have been insufficiently immunized (single immunization prior to 1989, when two doses became standard)
  - Diminished immunity vaccination in childhood (occurs rarely but with increasing frequency as adults get older)

#### What to be done

Do a physical examination, checking for Koplik's spots or the rash that usually appears several days after the spots have disappeared. Due to the success immunizations, most young providers have never seen a case of measles. To help confirm the diagnosis, they will frequently order a blood test to detect the presence of antibodies against the measles virus. They may also use other blood tests to help diagnose a bacterial infection that may develop in addition to the original viral infection.

# **Treatment Options**

# Prevention

Vaccination is the key to preventing measles. Since the 1980s, weakened measles vaccine, available as the combination vaccine of measles-mumpsrubella (MMR), is administered in two doses—one at age 12 to 15 months and the second at age 5 to 12 years. Of those who receive the vaccine, greater than 95% have lifelong immunity. Note: People allergic to eggs (the vaccine virus is grown in chick embryos), and those allergic to neomycin should consult with their physician before receiving the vaccine.

#### Treatment Plan

drinking plenty of fluids, and treatment to relieve symptoms are adequate if there are no complications.

### **Drug Therapies**

The following medications may be used in the management of measles:

- Antipyretics (for example. acetaminophen) for high fevers
- Antibiotics for complications such as pneumonia and ear infection
- Ribavirin for antiviral treatment (not FDA-approved for this use)
- followed Immune globulin measles vaccination 5 to 6 months later

#### Alternative Complementary and **Therapies** Nutrition

Vitamin A

People who are deficient in vitamin A are more likely to get infections, including measles, and their cases are more likely to be severe, even fatal. In areas of the world where vitamin A deficiency is widespread or where at least 1% of those with measles die, experts (including the World Health Organization) recommend giving high doses of vitamin A supplements to children with the infection.

#### Herbs

Flavonoids, plant compounds with potent biologic activity, are believed to help fight viruses. Of those tested in vitro (in a lab). the following has demonstrated slight benefit against measles:

 Wax tree (Rhus succedanea L.); rhusflavanone is the ingredient in the case of measles.

#### In addition:

flower (Calendula has shown antiviral Calendula activity in vitro and is thought to enhance the immune

- although it has not been studied against measles specifically.
- Spicebush (Lindera benzoin) is a remedy used by Native Americans of the Cherokee nation for measles; not studied scientifically.

Thirty out of 142 extracts of traditional herbal remedies studied in vitro (in test tubes) showed antimeasles activity. The most active included:

- Mugwort (Artemisia princeps)
- Kosam seed (Brucea javanica)
- Sappan wood (Caesalpinia sappan)
- Goldthread (Coptis chinensis)
- Forsythia (Forsythia suspensa)
- Amur corktree (Phellodendron amurense)
- Pomegranate (Punica granatum)
- Japanese sumac (Rhus javanica)
- Chinese Skullcap (Scutellaria baicalensis)
- Fire-flame bush (Woodfordia floribunda)

Test tube studies do not necessarily translate to effectiveness or safety in people; more research is needed to know the value of these herbs in clinical use.

### Homeopathy

- Aconitum for symptoms that come on suddenly including fever, conjunctivitis, dry cough, and restlessness; best used very early in the course of the disease
- Apis mellifica for individuals with swollen lips and eyes and a rash that is not fully developed; warmth increases itchiness as well as swelling
- Belladonna can be used either during early stages of measles or after the rash has erupted; useful for those who have difficulty sleeping and symptoms that include fever, headache, and drowsiness
- Bryonia for individuals with a delayed rash who have a dry, painful cough, headaches, and muscle pain that worsens with movement and warmth; this remedy is most appropriate for individuals with a rash primarily on the chest, a

- dry mouth, and a desire for cold drinks
- Euphrasia for nasal discharge, red eyes, and tears associated with measles; this remedy is most appropriate for individuals who have a strong sensitivity to light
- Gelsemium for the early stages of measles when there is a slow onset of fever and chilliness, cough, headache, weakness, and a watery nasal discharge that burns the upper lip; the individual for whom this remedy is most appropriate may be tired, apathetic and have little or no thirst
- Pulsatilla can be used at any stage of the measles but often used after fever has resolved; the individual for whom this remedy is appropriate may have thick, yellow nasal discharge, a dry cough at night, a productive cough in the daytime, and mild ear pain; symptoms are frequently mild
- Sulphur for measles in which the skin has a purplish appearance; the individual for whom this remedy is appropriate may have red mucus membranes with a cough and diarrhea that is worse in the mornings

### Prognosis/Possible Complications

Measles is most often an uncomplicated childhood illness. However, infants and especially those who adults. malnourished or whose immune system is weak, may develop complications that involve the respiratory system, central nervous system, or digestive system, in which case hospitalization is required. A small percentage of people who contract measles will die as a result. The measles mortality rate is 0.3% in industrialized countries, and 1% to 10% in developing countries. Measles in a pregnant woman can result in premature birth, miscarriage, stillbirth, or low-birth-weight babies. Infants of mothers with active measles should be given immune globulin at birth. Pregnant women should not be vaccinated.

# 97. Meningitis; Brain Inflammation

Meningitis is an inflammation of the meninges. It is most often caused by a viral or bacterial infection. Distinguishing between a viral and a bacterial cause is difficult; however, in the case of meningitis it is extremely important. Viral meningitis usually clears up on its own and does not cause any permanent harm. However, bacterial meningitis may lead to brain damage, learning disabilities, hearing loss, or death without treatment for the specific type of bacteria. Meningitis can also be caused by fungal infections (cryptococcus), tuberculosis, or chemicals.

## Signs and Symptoms

In newborns, signs and symptoms include the following:

- Irritability
- High-pitched cry
- Poor feeding
- Vomiting .
- Fever
- Seizures
- Bulging fontanelle ("soft spot" in the skull) and/or stiff neck (less common)

In children and young adults, signs and symptoms include the following:

- Fever
- Headache
- Vomiting •
- Stiff neck
- Upper respiratory tract infection
- Sensitivity to light
- Drowsiness
- Tiny red or purple spots on the skin (petechiae) or other bleeding in the skin
- Confusion
- Seizures
- Clouding or loss of consciousness

### What Causes It?

types of bacteria can cause Several meningitis:

Neisseria meningitis causes meningococcal meningitis, currently the most common form of meningitis in children and young adults, and the only type that occurs in outbreaks.

- Haemophilus influenzae was the most common cause in infants and children under 6 years old prior to 1986 when an H. influenza vaccine (HiB) was introduced. The vaccine has virtually eradicated this form of meningitis in countries where the vaccine is administered.
- Streptococcus pneumonia occur following an ear or sinus infection, pneumonia, or injury to the head.
- Listeria monocytogenes tends to affect extremes of ages (newborns and the elderly).
- Group B streptococcus occurs in newborns.
- Gram-negative bacilli (such as Escherichia coli. Proteus. Pseudomonas aeruginosa. Klebsiella pneumoniae, Salmonella spp., Enterococcus spp.) can cause meningitis following a head injury or brain surgery.
- Staphylococcus aureus may be seen following a head injury or brain surgery.

Viral meningitis can be caused by several types of viruses, including:

- Enteroviruses (which multiply in the intestinal tract)—common in infants and small children
- by Arboviruses—carried arthropods, such as ticks; seen in children
- Mumps virus—seen in children between the ages of 5 and 9 who have not had the MMR vaccine
- choriomeningitis Lymphocytic virus-seen in workers who have contact with hamsters, rats, or mice
- Herpesviruses
- Human immunodeficiency (HIV)—meningitis may be the first sign a person is infected with HIV

#### Who's Most At Risk?

characteristics These conditions and increase the risk for bacterial meningitis:

Crowded urban areas or dormitories (for meningococcal disease)

- Otitis media, mastoiditis, sinusitis, or pneumonia
- Significant head injury, skull trauma, or cerebrospinal rhinorrhea
- Sickle-cell anemia (in children)
- Alcoholism
- A suppressed immune system (for pneumococcal disease)
- Brain surgery
- Endocarditis (inflammation of the lining of the heart's chambers)
- Cancer
- Never receiving the H. influenza (HiB) vaccine (see section entitled What Causes It?)

These conditions and characteristics increase the risk for viral meningitis:

- Not being immunized with the measles, mumps, and rubella (MMR) vaccine.
- Daycare centers (for children)
- Lack of safe-sex practices and therefore being at risk for contracting herpesviruses and HIV
- Laboratory work that requires handling rats, hamsters, and mice or their wastes

### What to be done

Early diagnosis is the key to treating meningitis successfully. Physicians will ask for detailed information about preexisting conditions and any exposure to possible causes. When providers suspect meningitis, they perform a lumbar puncture as soon as possible so that the fluid can be examined and tested for infection. Antibiotics are started right away; even before the lumbar puncture results are available. The provider may also perform blood tests and use computed tomography, magnetic resonance imaging, or other techniques to image the brain.

# **Treatment Options Prevention**

To help prevent meningitis, children should be vaccinated against H. influenzae and mumps; the elderly and those who are debilitated should receive a pneumococcal vaccine.

# Drug Therapies

The length of treatment varies with the organism being treated, ranging from one to three weeks. If bacterial meningitis is suspected, antibiotics must be started

immediately, even before results from the lumbar puncture, blood tests, and imaging studies have been completed or returned. The following categories of medications will be used or considered in the case of bacterial meningitis:

- Antibiotics, often in combination, including ampicillin, cephalosporins, gentamicin, vancomycin, and/or trimethoprimsulfamethoxazole
- Corticosteriods to reduce neurological complications
- Diazepam and/or phenytoin if seizures occur
- Rifampin is given to household contacts of those with meningococcal meningitis to reduce their risk of contracting the disease.
- There is no specific antiviral therapy for infection with enteroviruses, arboviruses, mumps virus, or lymphocytic choriomeningitis virus.
- Herpes simplex virus type 2 may be treated with acyclovir, but it is not clear that this changes the course of the illness.
- HIV meningitis may be treated with antiretroviral drugs.
  - Intravenous gamma globulin to boost immunity may be used for those with meningitis caused by an enterovirus.

#### Surgical and Other Procedures

Surgery needs to close an abnormal opening that allows cerebrospinal fluid to leak outside its usual area; such a leak could allow bacteria or viruses to enter the brain or spinal cord.

# Complementary and Alternative Therapies

Nutrition

### Vitamin B<sub>12</sub>

People with meningitis from tuberculosis had decreased levels of vitamin  $B_{12}$ . More research is needed to determine whether measures to increase vitamin  $B_{12}$  can help treat tuberculous meningitis.

#### Vitamin A

Vitamin A deficiency may play a role in this type of meningitis.

# Herbs

# Garlic

In laboratory tests, garlic (Allium sativum) has been shown to stop the growth of and Cryptococcal the fungus kill even neoformans. When combined with the antifungal medication amphotericin garlic seemed to augment the effects of the against cryptococcus. medicine subsequent study of five patients with cryptococcol meningitis suggested that the antifungal effects of garlic might be conferred to people, although more extensive research is needed.

#### **Echinacea**

In animals with suppressed immune systems infected with L. monocytogenes, echinacea (Echinacea purpurea) improved immune function, significantly reduced the amount of bacteria, and increased survival rate. It is not known whether echinacea will help treat meningitis caused by L. monocytogenes in humans.

#### Homeopathy

- Apis Mellifica -- for meningitis in children with such intense head pain that they bore their heads into a pillow
- Arnica Montana -- for meningitis following surgery or an injury to the head; this remedy is most appropriate for individuals who often insist that there is nothing wrong with them
- Belladonna -- for a sudden onset of high fever which accompanies meningitis; this remedy is most appropriate for individuals who are hot and flushed with wide pupils, and may have nightmares and delusions
- Bryonia -- for meningitis with impaired consciousness and a characteristic movement of the mouth in which the jaw moves side

- to side quite rapidly in a somewhat contorted manner
- Helleborus -- for meningitis with impaired consciousness and stupor; individual may also be anguished and pleading for help; shaking or rolling of the head may also occur
  - Hyoscyamus -- for meningitis with violent spasms that occur with shrieking and grinding of the teeth

# Prognosis/Possible Complications

Sixty percent of infants who survive bacterial meningitis have long-term neurological complications or developmental difficulties. Most people who get viral meningitis recover completely without consequences. Complications of meningitis may include hearing loss, seizures, cerebral edema (brain swelling), weakness on one side of the body, impaired speech, visual impairment or blindness, intellectual deficits, difficulty coordinating movements, breathing difficulty, respiratory arrest, and recurring meningitis.

### Follow up

For the first one to two days after treatment begins, patients should be monitored in the intensive care unit to be sure that the medication is working, to watch for any seizures, and to prevent aspiration. If signs and symptoms do not improve after one to two days, physicians should check the cerebrospinal fluid again.

### **Special Considerations**

Pregnant women often carry L. monocytogenes and S. agalactiae in their genital tract or rectum without having symptoms and may transmit these infections to their children during birth. Pregnant women should not take rifampin to prevent meningitis because it is not clear whether this drug may harm the fetus.

# 98.Menopause

Menopause is a normal biological event that marks the end of a woman's reproductive years. It is the point when menstruation stops permanently. On average, menopause occurs at age between 43-51, but like the beginning of

menstruation in adolescence, timing varies from person to person. Today, most women will spend at least one-third of their lives in or beyond menopause. Menopause is the last stage of a gradual biological process in which the ovaries reduce their production of

female sex hormones. Estrogen production in the body diminishes slowly over a period of years, commonly resulting in hot flashes, night sweats, mood swings, and memory This gradual phase before loss. permanent cessation of menstrual periods is sometimes called perimenopause. process of menopause is considered when a woman has complete menstruated for an entire year. Another type menopause, known as menopause, occurs if both ovaries are removed for medical reasons. This may be done at the time of a hysterectomy. Living without the protective effects of estrogen increases a woman's risk for developing serious medical conditions, osteoporosis and cardiovascular disease. There are a variety of treatments available, however, to help ease the symptoms of and reduce health risks associated menopause.

### Signs and Symptoms

Each woman experiences her own variation of the typical symptoms of menopause. Some researchers speculate that these differences may be due to differences in diet, lifestyle, and/or cultural attitudes toward aging. In general, however, the loss of estrogen that occurs during menopause causes the following symptoms:

- Irregular menstrual cycles menstrual bleeding slows, becomes erratic, and then stops permanently (the process takes about 4 years)
- Hot flashes—flushing of face and chest (may be accompanied by heart palpitations, dizziness, headaches)
- Night sweats
- Cold hands and feet
- Vaginal changes—dryness, itching, bleeding after intercourse
- Urinary changes—frequent urination, burning during urination, urinating at night, incontinence
- Insomnia
- Mood changes—depression, irritability, tension
- Loss of skin tone leading to wrinkles
- Weight gain and change in weight distribution with increased fat in the central, abdominal area

Over time, depleted estrogen levels can contribute to the development of more serious medical conditions, including the following:

- Osteoporosis
- Cardiovascular disease
- Alzheimer's disease
- Macular degeneration
- Glaucoma
- Colon cancer

#### Causes

Menopause is caused by a gradual reduction in the amount of estrogen produced in the ovaries. Estrogen, a female hormone produced primarily by the ovaries, is essential for the reproductive process and influences menstrual cycles, pregnancy, some aspects of mood, and the aging process. In the years leading up menopause, the ovaries become functional and produce lower amounts of estrogen and progesterone. Women who smoke may reach menopause at a younger age than those who do not smoke. Menopause can also be caused by ovarian failure from cancer therapy, such chemotherapy or radiation treatments.

#### Risk Factors

Menopause is part of the natural aging process in all women, unless it is caused by surgical removal of both ovaries. Surgical menopause tends to cause a more abrupt onset of symptoms. The following risk factors may also hasten the onset of menopausal symptoms:

- Radiation, and/or chemotherapy
- Premature ovarian failure
- Smoking
- Hypothyroidism—diminished production of thyroid hormone
- Insufficient production of hormones by the adrenal glands

#### Diagnosis

In general, menopause is considered complete when a woman has not menstruated for at least 1 year. A physician will perform an examination that includes a Pap smear, blood tests looking at hormone and cholesterol levels, and, possibly, a bone density measurement. It is important to have a thorough discussion with the physician regarding the benefits and risks of different options for reducing symptoms and health risks. If vaginal bleeding resumes

unexpectedly once menopause has occurred, consider a test called an endometrial biopsy. In this test, a gynecologist takes a sample of the endometrium and examines them under the microscope for abnormal changes.

## **Preventive Care**

The following preventive measures may help diminish symptoms and reduce the risk of serious complications (such as osteoporosis and cardiovascular disease) associated with menopause:

- Quitting smoking—smokers tend to begin menopause 1 to 2 years earlier than nonsmokers; smokers are also at an increased risk for heart disease and osteoporosis
- Taking calcium supplements helps protect against bone loss
- Exercising slows the rate of bone loss, reduces hot flashes, and improves mood
- Consuming low-fat diets helps prevent cardiovascular disease by decreasing LDL "bad" cholesterol and by lowering the chances of weight gain
- Taking certain medications (such as estrogen or non-hormonal medications)—prevents long-term illnesses associated with menopause, such as osteoporosis
- Avoiding caffeine—some studies suggest that caffeine consumption may be a risk factor for osteoporosis in postmenopausal women

#### **Treatment Approach**

The goal in treating menopause is to alleviate symptoms and reduce the risk for long-term medical conditions, such as heart disease, breast cancer, and osteoporosis. There are a variety of treatment options available to menopausal women. To help determine the most appropriate treatment, it is important for each woman to discuss personal risks and benefits.

To combat symptoms and prevent the development of osteoporosis associated with diminished estrogen levels, hormone replacement therapy (HRT) may HRT involves considered. administration of the female sex hormones. and progesterone. Estrogen estrogen replacement therapy (ERT) refers to the administration of estrogen alone. ERT has many of the symptoms of menopause, and is also thought to help prevent osteoporosis. Hormone treatment for menopause is quite controversial, however. Preliminary research suggested that HRT might help prevent heart disease. But, the latest and largest studies report that that is not the case. In fact, HRT may increase your risk for both heart disease and stroke. Based on these concerns and scientific evidence to date, physicians are unable to recommend long-term use of HRT. For some women,

proven to be very effective in relieving

menopause may be fine. In addition, there are non-hormonal medications and non-drug therapies that can help reduce risk for long-term medical conditions associated with menopause:

• Selective estrogen receptor

taking HRT for a short period of time (like 1

to 2 years) to relieve symptoms of

- Selective estrogen receptor modulators (SERMs) help prevent osteoporosis
- Calcium, vitamin D, and other nutrients increase bone mineral density
- Soy foods help diminish hot flashes and improve cholesterol which, in turn, may reduce the risk of heart disease
- Exercise boosts bone mineral density, reduces hot flashes, and improves mood
- Low-fat diets reduce the risk of heart disease

Other remedies that may help alleviate the symptoms of menopause include magnesium, black cohosh techniques.

### Lifestyle Exercise

The benefits of exercise include:

- Slowing the rate of bone loss (through weight-bearing exercises)
- Reducing hot flashes
- Boosting mood
- Enhancing memory and concentration
- Improving cholesterol
- Improving pelvic muscle tone through Kegel exercises
- Maintenance of general health and strength, particularly for elderly who are better able to maintain independence if they exercise

The right diet can help a woman battle many of the risks and discomforts associated with menopause. A low-fat, low-cholesterol diet, for example, may diminish the risk of heart disease in menopausal women by providing the following benefits:

- Less of a rise in LDL cholesterol and triglycerides
- At least short-term lowering of blood pressure
- Diminished weight gain

In addition, soy based foods like tofu have been shown to help minimize certain symptoms of menopause, including hot flashes. Adding plenty of calcium to the diet can also help menopausal women avoid bone loss. (Foods rich in calcium include dairy products, leafy green vegetables, almonds, and dried beans). High fiber meals may also help lower a woman's risk of high cholesterol and heart disease.

#### Medications

There are many medications available in the form of natural and synthetic hormones progesterone) (estrogen and to menopause. symptoms of Commonly referred to as hormone replacement therapy (HRT), these medications are usually administered in pill form, although skin patches and vaginal creams may also be used. The following information represents a summary of the most commonly used hormone medications. A woman and her physician can discuss the pros and cons of all treatment options to determine which approach is most appropriate.

Estrogen

Estrogen replacement therapy (ERT) refers to the administration of the female sex hormone, estrogen. In addition to reducing the symptoms of menopause, ERT is thought to help prevent the devastating effects of osteoporosis. Most studies showing long-term beneficial effects for ERT have examined this hormone alone. The decision regarding whether to take estrogen depends factors on several including the menopausal severity of symptoms as well as risk for osteoporosis and breast cancer. Studies indicate estrogen helps to reduce hot flashes and vaginal dryness. It can also slow bone loss thereby minimizing fractures associated

with osteoporosis, and improve cholesterol levels. Women who take estrogen may be at lower risk for Alzheimer's disease, colon cancer, and macular degeneration.

Despite these potential advantages, studies indicate that estrogen increases the risk of developing breast cancer and, possibly, gallbladder disease, asthma, liver disease, blood clots, stroke, and, if used without progesterone, uterine cancer. Side effects of estrogen use include bloating, nausea, and breast tenderness. Estrogen is available in a variety of forms-estradiol is considered the strongest form and estropipate the weakest. Mixtures of estrogens (also known conjugated estrogens) are also prescribed.

#### Estrogens (or estrogen derivatives)

- Conjugated equine estrogensavailable as tablet. cream, injection
- Conjugated synthetic estrogens-
- Dienestrol-vaginal cream
- Esterified estrogens—tablet
- Estradiol—tablet, transdermal patch, vaginal ring, or injection
- Estriol—a weak estrogen; available in Europe in oral, topical, or vaginal gel forms; made in compounding pharmacies in the United States as tablet, capsule, or gel that include 10% estradiol, 10% estrone, and levels 80% estriol: serum estradiol and estrone should be followed and the dosage adjusted if levels fall outside the therapeutic range
  - Estropipate—tablet, cream
  - Ethinyl estradiol—tablet

Progesterone

Estrogen stimulates the growth of the inner lining of the uterus (endometrium); it is the endometrium that sheds menstruation. ERT used after menopause can also stimulate endometrium growth, but this growth may occur uncontrollably and Progesterone result in cancer. counteracts this dangerous effect on the uterus and reduces the risk of developing uterine cancer by causing monthly shedding of the endometrium. Therefore, when a menopausal woman has not had

hysterectomy (has an intact uterus), progesterone is used in combination with estrogen.

In rare instances, progesterone may be used without estrogen to treat hot flashes and other symptoms of menopause. Generally, however, most physicians recommend that women who have a uterus use a combination of estrogen and progesterone to combat symptoms of menopause and reduce the risk of uterine cancer. Progesterone is available in synthetic forms (progestins) and natural forms. Natural progesterones appear to cause fewer side effects than synthetic progesterones. Progesterones frequently prescribed include:

- Medroxyprogesterone acetate tablet or injection
- Norethindrone acetate—tablet
- Micronized progesterone—tablet, cream, or suppository

#### **Combination Therapy**

Common combination prescriptions include:

- Conjugated estrogens and medroxyprogesterone—tablet
- Estradiol and norethindrone—tablet or patch
- Estradiol and micronized progesterone—tablet

#### **Testosterone**

Although generally considered a male hormone, testosterone may be prescribed to a woman in small amounts in combination with estrogen. Testosterone appears to improve bone mass, sexual drive, and mental alertness. Side effects of this therapy include increased body hair, acne, fluid retention, anxiety, and depression. The long-term risks of testosterone are not well known at this time. Common prescriptions with testosterone include:

• Estrogen Esterified and Testosterone

# Selective Estrogen-Receptor Modulators (SERMs)

A woman who either cannot or who chooses not to take estrogen may be advised to try a class of drugs called selective estrogen-receptor modulators (SERMs). Raloxifene, the main drug in this category used for menopause, helps to prevent osteoporosis without increasing a woman's risk of developing breast or uterine cancer. These medications do not improve symptoms of

menopause, however, and may even make those symptoms worse.

# **Nutrition and Dietary Supplements Bisphosphonates**

Another class of medications, the biphosphonates, is used primarily for women with early signs of bone loss or osteoporosis, and cannot take hormones. Alendronate, one type of biphosphonate, helps to build bone mass, particularly once osteoporosis has set in

#### Soy

Soy foods contain plant-based estrogens (phytoestrogens) called isoflavones that appear to reduce hot flashes, improve cholesterol, and may decrease bone loss. The North American Menopause Society (NAMS) recommends including soy foods in the diet, rather than soy supplements or substances with phytoestrogens, helping reduce menopausal symptoms. However, researchers are still working to determine whether soy increases decreases a woman's risk of developing either breast or uterine cancer.

#### Flaxseed

Flaxseed contains omega-3 fatty acids and plant-based estrogens (phytoestrogens) called lignans that may help reduce symptoms of menopause, protect against breast cancer, and prevent heart disease. More research is needed to determine the connection between the use of flaxseed and breast cancer in particular.

## Calcium

The National Institutes of Health (NIH) and NAMS recommends that postmenopausal women consume between 1,000 and 1,500 milligrams of calcium per day to boost bone mass. Some studies suggest that calcium may be particularly effective combined with ERT. Foods rich in calcium include dairy, green leafy vegetables, black strap molasses, almonds, and dried beans. If adequate amounts of calcium are not being obtained calcium through the diet. supplements may be necessary. Calcium is available in many forms, but one in particular—calcium citrate—appears to be more easily absorbed from the intestinal tract than other forms.

## Vitamin D

Vitamin D, along with calcium, is essential for building and maintaining healthy bones throughout life. In fact, calcium can be absorbed into the body only when vitamin D is present. As levels of vitamin D diminish with age, calcium deficiencies can arise, increasing the risk for osteoporosis and bone fractures. The recommended dietary intake for vitamin D is currently 400 IU per day for women between the ages of 50 and 70 years and 600 IU for those older than age 70. Sources of this vitamin include sunlight, fatty fish, dairy fortified with vitamin D, and supplements. Most women can meet their vitamin D needs with moderate exposure to the sun and with supplements.

Magnesium

Magnesium helps the body absorb calcium. These two nutrients should be taken together in a 2:1 ratio, calcium: magnesium (for example, 1,000 to 1,500 milligrams of calcium and 500 to 750 milligrams of magnesium per day). In addition, estrogen levels drop during menopause, magnesium levels seem to diminish as well. For this reason, magnesium may also help to relieve some menopausal symptoms such as hot flashes. More research is needed. Rich sources of magnesium include tofu, nuts (particularly Brazil nuts, almonds, cashews, black walnuts, and pine nuts), pumpkin and squash seeds, peanuts and other legumes, green leafy vegetables, wheat germ, soy bean flour, and black strap molasses.

Boron

Boron assists in the proper metabolism of magnesium. Studies suggest that 1 to 3 milligrams of boron per day is needed to maintain normal levels of magnesium. If normal levels of magnesium are not present, the body is less able to absorb calcium. Menopausal women who take boron supplements, therefore, can boost levels of calcium in their blood, which helps prevent bone loss. Generally, however, adequate amounts of boron can be obtained through foods such as vegetables, nuts, and legumes.

Vitamin K

Studies suggest that 45 milligrams of vitamin K per day may help prevent bone loss. Vitamin K can be found in green tea, turnip greens, broccoli, spinach, cabbage, asparagus, and dark green lettuce. Because this vitamin, in both supplement and dietary forms, helps blood to clot, those taking blood-thinning medications, such as warfarin, must not consume it.

#### Omega-3 Fatty Acids

Preliminary studies indicate that omega-3 fatty acids (in the form of fish oil or flaxseed) help to improve cholesterol levels and decrease the risk of heart disease.

#### Antioxidants

Antioxidants, such as vitamins C and E, may help women avoid serious medical conditions associated with menopause. For example, studies have shown that over the long term (10 years or more), 250 to 500 milligrams of vitamin C taken one to two times per day decreases the risk of heart disease and increases bone mass. In addition, 400 to 800 IU of vitamin E per day lowers the risk of heart disease and, possibly, other age-related illnesses such as Alzheimer's disease and macular degeneration. Large population studies also strongly suggest that intake of food sources of vitamin E (such as wheat germ, nuts walnuts, almonds. [particularly hazelnuts], vegetable oil [including canola, corn, soybean, and safflower], spinach, kale, sweet potatoes, and yams) also decreases the risk of a stroke after menopause.

#### Herbs

The information available to date suggests that menopausal symptoms may be alleviated for some women by using herbs, particularly black cohosh. Symptom improvement is different for each woman, however—some women have a noticeable improvement in symptoms such as hot flashes, mood swings, and insomnia, while others notice no change or only experience relief for a short period of time.

### Black cohosh (Cimicifuga racemosa)

Black cohosh is used to relieve symptoms of menopause including hot flashes, irritability, mood swings, and feelings of depression. This herb is considered a safe and effective alternative to estrogen when hormones cannot be used.

# Dong quai (Angelica sinensis)

Dong quai, in combination with other herbs, has been used for thousands of years in Traditional Chinese Medicine to relieve symptoms of menopause. While there continue to be reports of improvement in symptoms using this herb, the effect of using dong quai by itself varies from woman to woman.

# Red clover (Trifolium pratense)

Red clover contains high quantities of plantbased estrogens called isoflavones that may improve menopausal symptoms, reduce the risk of bone loss, and lower the risk of heart disease by improving blood pressure and possibly by increasing HDL cholesterol (the "good" kind of cholesterol).

## Asian ginseng (Panax ginseng)

Menopausal women to reduce stress, improve general well being, decrease feelings of depression, and enhance memory may use Asian ginseng. This herb is thought to have estrogen-like activities.

#### Wild yam (Dioscorea villosa)

Many women claim that wild yam (when used as a cream) improves menopausal symptoms, particularly vaginal dryness. While this extract has been converted to progesterone in laboratory test tubes, the value of wild yam for menopausal symptoms has not yet been fully evaluated in people or even in animals.

## Evening primrose (Oenothera biennis)

Some women report that evening primrose oil diminishes the frequency and intensity of their hot flashes, but these claims have not been proven by scientific studies. Herbalist may consider prescribing one or more of the following to alleviate symptoms of menopause:

- Licorice (Glycyrrhiza glabra)
- Stinging nettle (Urtica dioca)
- Saw palmetto (Serenoa repens)
- Uva ursi (Arctostaphylos uva ursi)
- Valerian root (Valeriana officinalis)
- Angelica root (Angelica archangelica); Purplestem angelica (Angelica atropurpurea)

#### Acupuncture

Acupuncture enhances the release of endorphins (opiate-like hormones), and preliminary studies suggest that it may improve mood, including feelings of sadness and fear, in menopausal women. It may also help to balance hormones and relieve hot flashes.

#### Massage and Physical Therapy

Stress reduction is an important aspect of living with menopause. Massage may reduce stress and promote healthy circulation and general relaxation.

# Homeopathy

- Lachesis (venom of the bushmaster)—hot flashes,
- Sepia (cuttlefish)—low energy, mood swings, vaginal dryness, irritability
- Pulsatilla (windflower)—mood swings, insomnia
- Sulphur (sulphur)—hot flashes, irritability
- Lycopodium (club moss)—bloating, flatulence, pain with intercourse
- Argentum nitricum (silver nitrate)—anxiety, nervousness, irritability, insomnia
- Calcarea phosphorica (calcium phosphate)—improves bone density
- Belladonna (deadly nightshade) hot flashes, especially if they begin abruptly.

#### Mind/Body Medicine

Some studies suggest that learning to relax the body (through paced respiration, or slow, deep breathing) may reduce the intensity of hot flashes.

# **Traditional Chinese Medicine**

In Traditional Chinese Medicine, or TCM, a woman is not generally referred to as "menopausal." Rather, a practitioner of TCM might say that she exhibits "kidney yin deficiency." TCM is based, in part, on a belief in yin and yang—defined as opposing energies, such as earth and heaven, winter and summer, and happiness and sadness. The focus of TCM, like many other alternative therapies, is to maintain balance and prevent illness. Therefore, a TCM practitioner restore to would attempt balance in the case of a "kidney yin deficiency" by boosting kidney energy. Menopausal women in China improvement in mood swings, irritability, anxiety, tension, and depression from TCM remedies, particularly acupuncture.

# Other Considerations Prognosis and Complications

As estrogen levels diminish during menopause, a woman's risk of developing the following medical conditions may increase:

- Cardiovascular disease
- Osteoporosis

- Alzheimer's disease
- Macular degeneration
- · Glaucoma
- Colon cancer

Selecting the appropriate treatment, whether medications, TCM, herbal remedies, or

lifestyle changes, can minimize discomfort and maximize the opportunities for a vital, healthy, satisfying life during and after menopause.

# 99. Mensural Pain; Dysmenorrhea

Primary dysmenorrhea, also known as mensural pain, affects young women in their teens and early twenties. Pain usually begins a day or two before menstrual flow, and may continue through the first two days of menstruation. Discomfort tends to decrease over time and after pregnancy. Underlying physical problems causes secondary dysmenorrhea.

### Signs and Symptoms

Symptoms and degree of pain vary, but may include the following.

- Abdominal cramping or dull ache that moves to lower back and legs
- Heavy menstrual flow
- Headache
- Nausea
- Constipation or diarrhea
- Frequent urination
- Vomiting (not common)

## What Causes It?

Primary dysmenorrhea is caused by the following.

- Strong uterine contractions stimulated by increased production of the hormone prostaglandin by the lining of the uterus (endometrium)
- Anxiety and stress
- Blood and tissue being discharged through a narrow cervix
- Displaced uterus
- Lack of exercise

Secondary dysmenorrhea can be caused by the following.

- Endometriosis (inflammation of the lining of the uterus)
- Blood and tissue being discharged through a narrow cervix
- Uterine fibroid or ovarian cyst
- Infections of the uterus
- Pelvic inflammatory disease (PID)
- Intrauterine device (IUD)

#### What to be done

A pelvic examination may include an internal examination, laparoscopy, and ultrasound. Need a Pap test or D&C to analyze tissue. Blood and urine samples may be required.

# Treatment Options Drug Therapies

- Anti-inflammatory agents such as ibuprofen (800 mg to start; 400 to 600 mg every six hours).
- Gonadotropin-releasing hormone (GnRH) or oral contraceptives
- Antibiotics will cure PID
- Estrogen or oral progestins (for example, norethindrone for 12 months brings relief).

# Complementary and Alternative Therapies

Dysmenorrhea may be effectively treated with nutritional support and mind-body techniques such as meditation, yoga, tai chi, and exercise.

#### Nutrition

- Increase intake of essential fatty acids, which are found in cold-water fish, nuts, and seeds. Reduce intake of saturated fats (meat and dairy products). Eliminate refined foods, sugar, dairy products, and methylxanthines (coffee and chocolate). Increase intake of fresh fruits and vegetables, proteins, and whole grains.
- Magnesium (400 mg per day) with B6 (100 mg per day) throughout cycle to promote hormone production and induce relaxation. Can be used at higher doses (magnesium up to 600 mg per day, and B6 up to 300 mg per day) for pain relief.
- Vitamin E (400 to 800 IU per day) to improve blood supply to muscles

- B-complex (50 to 100 mg per day) to reduce the effects of stress
- Essential fatty acids (Omega-3 and Omega 6 oils such as flaxseed, evening primrose, or borage oil) to reduce inflammation and/or support hormone production
- Niacinamide (50 mg twice a day) to reduce pain. Begin seven days before your period until the end of flow. Add rutin (60 mg per day) and vitamin C (300 mg per day) to increase effects.

#### Herbs

- Chaste tree (Vitex agnus-cactus) and black cohosh (Cimicifuga racemosa), 30 drop each, twice a day, to reduce dysmenorrhea.
- Red raspberry (Rubus idaeus) tea strengthens uterine tissue.
- Tea of chamomile (Matricaria recutita) and ginger root (Zingiber officinale) can help reduce ovarian cyst pain.
- Tinctures of cramp bark (Viburnum opulus), black cohosh, Jamaica dogwood (Piscidia piscipula), and wild yam (Dioscorea villosa) can be used together in equal parts to relieve pain and cramping. Use 20 drops every half hour for four doses, then as needed up to eight doses per day for seven days.

#### Homeopathy

- Belladonna for acute menstrual pain that often resembles labor pains; pain is often described as sharp, throbbing pressure in the pelvis accompanied by heavy bleeding; pain may extend to the back and is generally tends to worsen with walking or moving
- Chamomilla for menstrual pain with mood changes including irritability and anger; pain may occur after bouts of anger and be relieved by warmth; the individual may have the sensation of a weight on her pelvis
- Cimicifuga for pains that move from one side of the abdomen to the other and that are worsened by movement

- Colocynthis for sharp pains accompanied by anger and irritability
- Lachesis for pain and pressure that extend to the back; symptoms tend to worsen at night
- Magnesia phos for cramps or sharp, shooting pains that are relieved by warmth, pressure, and bending forward
- Nux vomica for cramping pains that extend to the lower back; these pains are often accompanied by nausea, chills, irritability, and a sensitivity to light, noise, and odors
- Pulsatilla for menstrual pains accompanied by irritability, moodiness (including feelings of sadness), dizziness, fainting, nausea, diarrhea, back pain, and headaches; there may be more pain when there is no menstrual flow

### **Physical Medicine**

- Castor oil pack. Apply oil directly to skin, cover with a clean soft cloth (for example, flannel) and plastic wrap. Place a heat source (hot water bottle or heating pad) over the pack and let sit for 30 to 60 minutes. For best results use three consecutive days in one week.
- Contrast sitz baths. Use two basins that you can comfortably sit in. Sit in hot water for three minutes, then in cold water for one minute. Repeat this three times to complete one set. Do one to two sets per day three to four days per week.

### Acupuncture

In the case of dysmenorrhea, a qi deficiency is usually detected in the liver and spleen meridians. Moxibustion is often added to enhance needling treatment, and qualified practitioners may also recommend herbal or dietary treatments.

# Chiropractic

Chiropractors report that some people with dysmenorrhea may benefit from spinal manipulation. Studies of women with a diagnosis or history of primary dysmenorrhea have found that spinal manipulation improves symptoms, but no more effectively than sham manipulation. Sham manipulation refers to maneuvers that

shift soft tissues surrounding the bone but to not actually adjust the spine or joint. Sham manipulation has been compared to placebo because both procedures look and feel the same.

Massage

Therapeutic massage is helpful in reducing the effects of stress.

#### Follow up

If symptoms change, or treatment does not help, tell your physician.

#### **Special Considerations**

Avoid caffeine, alcohol, and sugar prior to onset of period.

# 100. Migraines; Headache, Migraine

Migraines are severe, recurrent headaches that are generally accompanied by other symptoms such as visual disturbances or nausea. There are two types of migraine - classic and common. A classic migraine has an "aura" or warning associated with it that precedes the headache. The aura is often a visual disturbance (like seeing stars or zigzag lines or a temporary blind spot.) A common migraine does not have such a warning before the head pain begins. The experience of migraines, which affect 6 out of 100 people, tend to start between the ages of 10 and 46. More women than men have migraines.

Signs and Symptoms

The headache from a migraine, classic or common, has the following characteristics:

- Throbbing, pounding, or pulsating pain
- Often, begins on one side of your head and may spread to both or stay localized
- Most intense pain is often concentrated around the temple(s)
- Commonly lasts from 6 to 48 hours Accompanying symptoms that may precede or occur at the same time as the migraine include:
  - Nausea and vomiting
  - Dizziness described as lightheadedness or even vertigo (feeling like the room is spinning)
  - Loss of appetite
  - Fatigue
  - Visual disturbances, like seeing flashing lights or zigzag lines, temporary blind spots (for example, loss of peripheral vision), or blurred vision
  - Eye pain

- Extreme sensitivitity to light (called photophobia)
- Parts of your body may feel numb, weak, or tingly
- Light, noise, and movement especially bending over—make your head hurt worse; want to lie down in a dark, quiet room
- Irritability

Symptoms that may linger even after the migraine has resolved:

- Feeling mentally dull, like your thinking is not clear or sharp
- · Increased need for sleep
- Neck pain

#### Causes

The symptoms of migraines occur as a result of changes in the diameter of blood vessels to the brain and surrounding structures. Initially, the blood constrict (narrow), reducing blood flow to and leading to visual these areas disturbances, difficulty speaking, weakness, numbness, or tingling sensation in one area of the body, or other similar symptoms. When these symptoms start before the actual headache (as in classical migraine), it is called an aura. Minutes to hours later, the blood vessels dilate (enlarge) leading to increased blood flow and a severe headache. Things that can trigger migraine include the following:

- Alcohol
- Low blood sugar from, for example, missing meals
- Certain foods such as those containing the amino acid tyramine (found in red wine, aged cheese, smoked fish, chicken livers, figs, and some beans), chocolate, nuts, peanut butter, some fruits (like avocado, banana, and citrus), foods with monosodium glutamate (MSG

- an additive in many foods),
   onions, dairy products, meats
   containing nitrates (bacon, hot dogs,
   salami, cured meats) fermented or
   pickled foods
- Fluctuations in hormones (for example, menstruation)
- Certain odors, such as perfume
- Allergic reaction
- Bright lights
- Loud noises
- Stress, physical or emotional
- Sleeping too little or too much
- Caffeine
- Smoking or exposure to tobacco smoke
- Prolonged muscle tension

#### **Risk Factors**

- Women are more likely to get migraines than men
- Having other family members with migraine headaches
- Use of birth control pills, especially if you also smoke or have high blood pressure
- Being under age 40; after that point, the likelihood of migraine declines for both men and women
- Exposure and sensitivity to any of the potential triggers listed above

#### Diagnosis

The physical exam will include assessing your head, neck, eyes, and sinuses as well as performance of a neurological examination. Don't be surprised if the doctor asks some questions to test on short-term memory. On exam, the physician is likely to find nothing wrong.

- CT scan or MRI to look for a mass or other brain disorder or to check for sinusitis
- X-ray of the neck to look for arthritis or spinal problems; x-ray of the sinuses to look for sinusitis
- Electroencephalogram (EEG) a brain wave study, looking for any seizure activity
- Lumbar puncture

Contact specialist right away if any of the following apply:

 Have unusual neurological symptoms that have not experienced before like speech disturbance,

- change in vision, loss of balance, or difficulty moving a limb.
- Headache pattern or intensity is different
- Experiencing "the worst headache of life"
- Headache worsens when are lying down

These may indicate a stroke, a bleed in the brain, or other serious condition that warrants immediate attention and evaluation.

# **Treatment Approach**

There is no specific cure for migraine headaches. The treatment is geared toward preventing such symptoms by avoiding or altering triggers. Once migraine symptoms begin, however, treatment is aimed at preventing the headache pain if an aura (namely, associated symptoms that precede the headache) or treating the head pain once it has set in. There are a number of ways to accomplish all three of these – reduce the number and intensity of headaches, quickly abort the onset of a headache by treating the migraine at the time of the aura, or successfully diminish the head pain once have it.

A combination of medications for symptom relief together with lifestyle change and complementary therapies to reduce recurrence can offer effective management of migraines. Biofeedback may help to control the initial contraction of blood vessels and stress management may reduce both the frequency and intensity of attacks. Whenever possible, preventing migraines should be done without the use of medication. The treatment of migraines when the symptoms set in almost always requires medication, however.

## Lifestyle

Keeping a headache diary, particularly when you first begin to experience migraines, can help identify the triggers for headaches and how to modify environment and habits to avoid them. When a migraine occurs, write down the date and time it began. Note what ate for the preceding 24 hours, how long were slept the night before, what experiencing just before the headache, any unusual stress in life, how long the headache lasted, and what did to make it stop. Other lifestyle measures that may reduce the number of headaches include:

- Avoidance of smoking, caffeine, and alcohol
- Exercising regularly
- Getting adequate sleep each night
- Relaxing and reducing stress in life or negative bodily responses to Once headache stress. a associated migraine symptoms begin, measures that are helpful include:
- Rest in a quiet, darkened room
- Drink fluids to avoid dehydration (especially if you have vomited)

## Medications **Drugs for Prevention**

- Beta-blockers, such as propranolol or timolol
- Anti-depressants, including tricyclics (like amitriptyline), serotonin re-uptake inhibitors or SSRIs (like fluoxetine, fluvoxamine, paroxetine, and sertraline). nefazodone. and venlafaxine
- Anti-convulsions, such as valproic acid and divalproex sodium
- Calcium channel blockers, such as verapamil

# **Drugs for Treatment**

It is important to note that the intention of several of these medications is to keep the blood vessels narrow, thereby avoiding the headache that comes from the subsequent blood vessel widening. Therefore, these drugs should not be used by anyone with a heart condition.

- Ergots, including ergotamine and dihydroergotamine
- Serotonin agonists or triptans, including almotriptan, naratriptan, sumatriptan, rizatriptan, zolmitriptan

Isometheptene

Other medications are used to treat the headache pain or associated symptoms:

Anti-emetics - that is, drugs (like metoclopramide prochlorperazine) to relieve nausea and vomiting; may be given as a suppository if your vomiting is Significant enough to not be able to keep medication down

- Acetaminophen for pain
- Ibuprofen or other non-steroidal anti-inflammatory drugs (NSAIDs)
- Narcotics (like propoxyphene)
- Barbiturates (like butalbital)

# **Nutrition and Dietary Supplements**

Certain foods can trigger migraine headaches; these include:

- Chocolate
- Cheese
- Monosodium glutamate (MSG), a flavor enhancer found most notably in food from Chinese restaurants; can always ask them to prepare the food without MSG
- Foods containing the amino acid tyramine (found in red wine, aged cheese, smoked fish, chicken livers, figs, and some beans)
- Nuts
- Peanut butter
- Some fruits (like avocado, banana, and citrus)
- Onions
- Dairy products
- Meats containing nitrates (bacon, hot dogs, salami, cured meats)
- Fermented or pickled foods

# 5-hydroxytryptophan (5-HTP)

5-hydroxytryptophan (5-HTP) is an amino acid. The body makes 5-HTP tryptophan and converts it to an important brain chemical known as serotonin. 5-HTP dietary supplements help raise serotonin levels in the brain, which may have a positive effect on sleep, mood, anxiety, aggression, appetite, temperature, sexual behavior, and pain sensation. Some studies suggest that 5-HTP supplements may be effective in children and adults with various types of headaches including migraines.

#### Magnesium

Magnesium levels tend to be lower in those with migraine headaches, including children and teenagers, when compared to those who headaches. Combining do get magnesium with the herb feverfew along with vitamin B2 (riboflavin) may be particularly helpful. This is a welcome alternative for many, especially if you have trouble taking medications because of side effects. However, if you have 3 or more headaches per month, magnesium does not seem to work as well as prescription medications to prevent migraine headaches. Unless, a woman and migraines tend to happen around the time of menstrual period; then, magnesium can be an effective way to prevent such headaches. Magnesium sulfate may even be administered intravenously in the hospital if home remedies for the migraine symptoms are not working.

## S-Adenosylmethionine (SAMe)

It decreased the frequency, intensity, and duration of migraines for most of the people included in this evaluation. In addition, many reported an improved sense of well being and use of fewer painkillers.

#### Vitamin B2 (Riboflavin)

migraine sufferers, taking many For riboflavin regularly may help decrease the frequency and shorten the duration of migraine headaches. It is not clear how conventional riboflavin compares to medications used to prevent migraine headaches, however. As mentioned above, combination of riboflavin, magnesium, and feverfew is particularly helpful.

#### Other

Early information and individual reports suggest that glucosamine and coenzyme Q10 may each help to reduce the frequency of migraine headaches.

#### Herbs

#### Feverfew (Tanacetum parthenium)

Feverfew, traditionally used for headaches, is very popular for migraines. In fact, a survey conducted in the 1980s of 270 migraine sufferers in Great Britain revealed that more than 70% of individuals felt substantially better when taking fresh feverfew leaves every day. Since then, several well-designed studies have been conducted to evaluate the safety and effectiveness of feverfew for the prevention and treatment of migraine headaches. Most, but not all, of these studies have found beneficial results. It is particularly important when using feverfew to do so with guidance from a specialist because there is wide variability in the formulations of this herb sold over the counter.

#### Others

Although studies are lacking, herbal specialist to treat migraine and other types of headaches has used the following herbs clinically:

- Dong quai (Angelica sinensis)
- Devil's claw (Harpagophytum procumbens)
- Ginger (Zingiber officinale)
- Ginkgo biloba (Ginkgo biloba)
- Jamaica dogwood (Piscidia erythrina/Piscidia piscipula)
- Lavender (Lavandula angustifolia)
- Linden (Tilia cordata/platypus) flowers
- Peppermint (Mentha x piperita)
- Valerian (Valeriana officinalis)
- Willow bark (Salix spp.)

#### Acupuncture

An acupuncturist diagnoses headaches not as migraine, tension, or sinus, but rather as conditions deriving from "energetic" imbalances. Headaches are commonly seen and often successfully treated by acupuncturists. In addition to needling treatment, acupuncturists may recommend lifestyle changes, such as suggestions for specific breathing techniques, qi gong exercise, and dietary modifications.

#### Chiropractic

In one study, 218 individuals with migraine headaches were randomly assigned to receive spinal manipulation, a daily medication (amitryptiline—a drug used to prevent pain in chronic conditions such as migraine headache), or a combination of both. Spinal manipulation was as effective as the medication and had fewer side effects.

# Massage and Physical Therapy

Reflexology, a technique involving massage of "reflex points" on the hands and feet that correspond to areas throughout the body, helps become more aware of own body signals. This may allow anticipating the onset of a migraine sooner because of subtle symptoms that begin before the headache sets in. Reflexology helps improve general well-being and energy level.

# Homeopathy

- Belladonna for throbbing headaches that come on suddenly; these types of headaches tend to worsen with motion and light, but are partially relieved by pressure, standing, sitting, or leaning backwards
- Bryonia for headaches with a steady, sharp pain in the forehead

that may radiate to the back of the head; these types of headaches worsen with movement and light touch, but improve with firm pressure; this remedy is most appropriate for individuals who are irritable and may also experience nausea, vomiting, and constipation

- Gelsemium for pain that extends around the head and feels like a tight band of constriction; pain usually originates in the back of the head and may be relieved following urination; this remedy is most appropriate for individuals who feel extremely weak and have difficulty keeping their eyes open
- Ignatia for pain that may be described as a feeling of something being driven into the skull; these types of headaches tend to be triggered by emotion, including grief or anxiety, and the treatment is appropriate for both children and adults
- Iris versicolor for periodic migraines that begin with blurred vision, especially after eating sweets; pain usually occurs on one side of the head and may be partially relieved by gentle movement and/or fresh air
- Kali bichromicum for aching and pressing pains on the forehead (particularly between and behind the eyes); may be accompanied by sinus congestion or nausea and vomiting; this remedy is most appropriate for individuals who prefer to lie down in a dark room and who experience relief from warmth and eating
- Lachesis for migraines on the left side of the head that are typically worse in the mornings and before menstruation; this type of headache is aggravated by warmth and sunlight and relieved by open air and firm pressure
- Natrum muriaticum one of the most common remedies used for migraine headaches, particularly those that are described as "hammers beating the head;" pain is

relieved when the individual is lying down, alone, in a quiet dark room; these migraines may be associated with either menstruation or a grieving experience and are worse in the middle of the day; this remedy is most appropriate for children who look pale and feel nauseated, nervous, and emotional

- Nux vomica for headaches that are described as a "nail being driving into the head;" often accompanied by nausea and/or dizziness; this remedy is most appropriate for individuals who are constipated and irritable
- Sanguinaria for right-sided headaches that begin in the neck and move upwards, recur in a predictable pattern (such as every seven days), and are accompanied by nausea and vomiting; pain is aggravated by motion, light or sun exposure, odors, and noise; this remedy is appropriate for children who may have a craving for spicy or acidic foods, despite having a general aversion to eating due to the headache
- Sepia for migraines that are accompanied by nausea and are relieved when the individual is lying down; light and movement tend to worsen symptoms; this remedy is most appropriate for individuals who are moody and don't like being alone, but worry about being with others

Homeopaths may also prescribe the following remedies based on their knowledge and clinical experience:

- Pulsatilla for headaches triggered by eating rich, fatty foods, particularly ice cream; pain tends to move but may be concentrated in the forehead or on one side of the head; may be accompanied by digestive problems or occur around the time of menstruation; children for whom this remedy is appropriate often develop these symptoms while at school
- Spigelia for migraines described as a stinging, burning, or throbbing

pain, often on the left side of the head; symptoms tend to worsen with exposure to cold weather and with motion, but are temporarily relieved by cold compresses and when the individual is lying on the right side with the head propped up

Mind/Body Medicine

Reducing and learning to cope with stress effectively are important for trying to limit the number and intensity of your headaches. Techniques that can help include:

- Self-hypnosis
- Biofeedback
- Joining a support group
- Relaxation techniques such as progressive muscle relaxation (a practice that involves contracting and releasing muscles throughout body), meditation, and guided imagery

**Other Considerations Pregnancy** 

Many of the medications, herbs, and supplements used to prevent or treat

migraines should not be used during pregnancy. Please refer to monographs on the individual substances discussed in this article.

# Warnings and Precautions

It is important to use medications only as directed. Rebound headaches may occur from overuse of medications.

# **Prognosis and Complications**

Migraine headaches generally represent no significant threat to overall health, although they can be chronic, recurrent, frustrating, and interfere with day-to-day life on occasion. Stroke is an extremely rare complication from severe migraines. This may be due to prolonged constriction (narrowing) of blood vessels, reducing the blood flow to parts of the brain. For many, migraines go into remission or even disappear altogether. This happens as age in particular; for women, this may be related to declining levels of estrogen.

# 101.Miscarriage; Spontaneous Abortion

Spontaneous abortion, or miscarriage, is the loss of a fetus before 20 weeks of pregnancy. The most common cause of miscarriage is a genetic abnormality. About one-third to one-half of all pregnancies result in miscarriage. A second miscarriage generally occurs in only 1% of women. Almost one-third of miscarriages may occur as a late menstrual period, even before a woman knows for certain that she is pregnant.

### Signs and Symptoms

- Bleeding—brown or bright red vaginal bleeding or spotting
- Passage of clots or a gush of clear or pink vaginal fluid
- Abdominal pain or cramping
- Fever
- Decrease in signs of pregnancy, such as breast sensitivity and morning sickness
- Dizziness, lightheadedness, or feeling faint

#### What Causes It?

Chromosomal abnormalities account for up to 60% of losses

- Physical problems, such as distortion of the uterine cavity or adhesions from disease or surgery
- Endocrine or hormone disorders, such as diabetes and hyper- or hypothyroidism
- Infection, including bacterial, viral, parasitic, fungal, or acquired through sexually transmitted diseases
- Abnormal antibodies in the blood that cause formation of blood clots (for example, antiphospholipid antibodies, or APLA)
  - Other factors of conception (such as defective sperm cells, time of egg implantation), or stress

# Who's Most At Risk?

- Previous spontaneous abortion
  - Women age 35 or older
  - Cigarette smoking
  - Alcohol
  - Caffeine
- Cocaine use
  - X-ray exposure

- Environmental toxins—excessive exposure to lead, mercury, organic solvents
- Serious maternal illness
- Flight attendants working more than
   74 hours per month
- Maternal or paternal handling of anti-cancer agents
- Increased levels of homocysteine

## What to be done

Take a comprehensive medical, family, and social history to try to determine if there is a suggestion of an underlying cause. A pelvic examination detects uterine abnormalities. Ultrasound imaging and other diagnostic and laboratory tests may be used to confirm diagnosis and to evaluate the condition of the uterus and fetus.

# Treatment Options Prevention

Avoiding known risks, such as caffeine, alcohol, and cigarette smoking, as well as other risks listed above may help prevent miscarriage.

#### Treatment Plan

Immediate treatment sometimes involves surgery to remove pregnancy tissue. Physician may recommend counseling to help you through the grieving process. In vitro fertilization, embryo transfer, or artificial insemination may be used to achieve a successful pregnancy if you have a history of unexplained, recurrent miscarriages.

# **Drug Therapies**

- Anti-D immunoglobulin
- Antibiotics to treat infections
- Estrogen supplementation following uterine surgery for adhesions to stimulate the growth of the uterine lining
- Aspirin followed by heparin if a clotting abnormality is present
- Vaginal progesterone suppositories
- Immunotherapy

# Surgical and Other Procedures

Dilation and curettage (D&C) may be performed to remove pregnancy tissue if it has not been expelled naturally from the uterus. Other surgical procedures may be performed to address uterine problems or adhesions.

# Complementary and Alternative Therapies

There appears to be a strong connection between diet, lifestyle, and risk of spontaneous abortion. Before becoming pregnant, therefore, it is a good idea to have counseling about the risks, including the importance of avoiding caffeine, alcohol, and recreational drugs. Chinese herbal medicines may help prevent recurring miscarriages caused by immune system.

#### Nutrition

# Vitamin B Complex, Including Folic Acid:

Many naturopathic and other doctors suggest using vitamin B complex (50 mg a day) with additional vitamin B6 and folic acid (800 to 1000 mcg a day) for women planning to become pregnant and for those are pregnant. These preventive measures suggest a connection between recurring miscarriages problems and metabolizing methionine and homocysteine in the body. Methionine is an amino acid, a building block of protein. Homocysteine is a by-product of the breakdown of methionine. Abnormal use of homocysteine by the body leads to a rise in levels of this compound, which, in turn, may play a role in spontaneous abortion, and the development of defects in the neural tube. Folic acid, vitamins B<sub>6</sub> and B<sub>12</sub>, and betaine all play a role in the proper use of methionine and homocysteine. In addition, a fetus, a newborn, and a pregnant woman all need more folic acid and B<sub>12</sub> than other people; therefore, taking the supplements mentioned both before and during pregnancy is valuable, and may prevent miscarriage in the case of elevated homocysteine levels. Moderate to high caffeine intake may also be related to elevated homocysteine levels.

#### Caffeine:

Caffeine and pesticides easily cross the placenta from the woman's body to her fetus. Caffeine stays in a pregnant woman's body much longer than in non-pregnant healthy adults. It stays in newborns even longer. Light caffeine use (1 to 150 mg daily) increased risk for abortion only in women who had a history of previous spontaneous abortion. (One cup of coffee has 107 mg of caffeine, one cup of tea has 34 mg, and one glass of cola has 47 mg, assuming all are caffeinated beverages.)

Coffee was the main source of caffeine in moderate-to-heavy users. Light users were more likely to get caffeine from tea and other sources. Vitamin B Complex, Including Folic Acid, researchers have recently reported that higher caffeine intake may be related to higher levels of homocysteine. This may contribute to the increased risk of spontaneous abortion in moderate coffee drinkers.

### Coenzyme Q10:

CoQ10 levels are lower in women who have had a recent miscarriage. Similar to methionine and homocysteine described above, the production of coenzyme Q10 in the body also depends on folic acid, vitamin B<sub>12</sub>, and betaine. Therefore, the same supplements that support methionine metabolism (namely, folic acid, vitamin B<sub>12</sub>, and betaine) maintain normal coenzyme Q10 levels in the body.

### Magnesium and Selenium:

A small study of infertile women and women with a history of miscarriage suggest that low levels of magnesium may impair reproductive function, and may contribute to miscarriage. Oxidation, a process that is damaging to cell membranes. can lead to loss of magnesium. The same study suggests that the antioxidant selenium protects the cell membrane, maintaining appropriate levels magnesium. The authors of the study taking both magnesium selenium supplements. Women who have miscarried have lower levels of selenium than women who carry a pregnancy to full term. The recommended doses are generally 300 to 400 mg per day of magnesium and 200 mcg per day of selenium.

#### Other Antioxidants:

Vitamin A, vitamin E, and beta-carotene levels tend to be lower in women who have miscarried as well; these nutrients are generally found in prenatal vitamins.

## Fish Pollutants:

Eating fish contaminated with pollutants, namely persistent organochlorine compounds (POCs), may increase pregnancy risk, although it is not clear whether eating contaminated fish contributes to spontaneous abortion.

#### Herbs

## A Chinese and Japanese Herbal Remedy:

There are case reports of recurring spontaneous abortion caused by immune system problems that have been successfully treated with Traditional Chinese Medicine (TCM). When their immune systems returned to normal as a result of taking this preparation, the women were able to carry their pregnancies to term.

#### Homeopathy

No scientific literature supports the use of homeopathy to prevent spontaneous abortion. An experienced homeopath would consider individual case and may recommend treatments to address underlying condition and support overall health.

# Acupuncture

No scientific literature supports the use of acupuncture to prevent spontaneous abortion.

### **Prognosis/Possible Complications**

There is only a 1% chance of recurring miscarriage; however, the risk increases significantly with each subsequent loss. Possible complications from spontaneous abortion include infected pregnancy tissue, which could lead to pelvic abscess, septic shock, or even death. Depression and guilt are common feelings that may follow a miscarriage; as mentioned earlier, there are times when counseling is appropriate.

# Follow up

Physician will monitor until the miscarriage is complete.

# 102.Mononucleosis; Epstein-Barr virus

Infectious mononucleosis also referred to as "mono" or "the kissing disease," causes symptoms that include fever, sore throat, and swollen glands. A person is infectious several days before symptoms appear and for some time after,

possibly for months or, rarely, even years. Direct contact with virus-infected saliva, mainly through kissing, can transmit the virus and cause mono.

# Signs and Symptoms

• Fever

- Fatigue
- Sore throat, often severe
- Swollen tonsils
- Swollen lymph nodes in the neck
- Enlargement of the spleen
- Enlargement of the liver
- Rash
- Headache

Symptoms may take between 4 and 7 weeks to develop after exposure to the virus. Symptoms can last only a few days or as long as several months. In most cases, they disappear in 2 to 6 weeks.

## What Causes It?

The Epstein-Barr virus (EBV) causes the vast majority of mono cases; 90% of adults have antibodies to the virus reflecting former exposure and immunity against EBV. EBV infects and reproduces in the salivary glands. Direct contact with virusinfected saliva, such as by kissing, can transmit the virus and cause mono. You can also get mono through transfusions with infected blood products.

#### Who's Most At Risk?

The following factors can put a person at higher risk for developing mono:

- Age: the incidence peaks in the 15to 19-year age group; after age 35, the rate is low
- Delayed exposure: mono is more prevalent in areas with higher standards of hygiene, infection with EBV is often delayed until adulthood
- Getting a blood transfusion
- Diminished or suppressed immune function

# What to be done

Do a physical examination, checking for fever, sore throat, swollen glands, and for swelling of spleen or liver. A blood test is performed to make the diagnosis of mono.

# **Treatment Options** Prevention

Since mono is not generally spread through the air, a person who has mono does not need to be isolated. Household members or college roommates have only a slight risk of being infected unless they kiss the person.

# Treatment Plan

Rest is necessary when symptoms are severe; increased activity is allowed as the symptoms improve, generally after about 2 weeks. Contact sports and heavy lifting should be avoided for 2 months due to the risk of rupturing the spleen.

#### **Drug Therapies**

- Acetaminophen
- Corticosteroids, such as prednisone, are used only to treat airway obstruction from enlarged tonsils

Children with EBV should not take aspirin because of the risk of developing Reye's syndrome, a rare condition that can cause vomiting and can affect the liver, brain, and other organs.

# Surgical and Other Procedures

In the case of a ruptured spleen associated with mono, surgical removal of the spleen may be necessary.

#### Complementary and Alternative **Therapies**

Several studies show that stress and relaxation affect our immune systems. Stress can increase susceptibility to infection. Steps that reduce stress may help prevent infection with viruses such as EBV. A meta-analysis of 24 studies reviewed immune changes in healthy people under short-term stress. Results showed that the subjects' immune systems did not respond as well during stress to phytohemagglutinin, a plant compound that normally boosts immune system cells called T cells. It showed that relaxation methods reduced white blood cells, and increased the number of antibodies and the activity of "natural killer" cells (immune cells that attack infected cells and other harmful cells). Stress-reduction measures included guided imagery, meditation, and biofeedback. It's not clear yet what this may mean for prevention or treatment of EBV specifically. But it sheds light on the ways relaxation methods may boost immune function in general and reduce risk of any infection. There is some evidence that nutrition and plant-based medicines may help reduce the long-term effects of EBV infection and complications linked to EBV.

#### Nutrition

When you have an infection, immune system needs more folate (vitamin B<sub>0</sub>) to make new cells and antibodies. Blood levels of folate were tested in 260 patients with a variety of viral and other infections, 15 of whom were infected with EBV. The folate shortage may relate to fatigue and a long recovery period following a viral infection, including EBV. It is not definitive without additional research, but taking folate supplements may improve recovery.

#### Herbs

Echinacea (Echinacea spp.), wild indigo tinctoria), and (Baptisia (Glycyrrhiza glabra) are used in acute conditions to boost immunity and improve the flow of lymph. Retinoic acid and glycyrrhetinic acid are derivatives licorice root (Glycyrrhiza glabra) and may be used for similar purposes. Astragalus (Astragalus membranaceus) and lomatium (Lomatium dissectum), which have deeper immune-enhancing properties, are used to established infections or chronic treat problems.

#### Homeopathy

- Belladonna for early stages of mononucleosis with sudden onset of fever; this remedy is most appropriate for individuals who have a red face, red lips and a dry, throbbing throat with swollen tonsils; despite these symptoms the individual tends not to be thirsty
- Ferrum phosphoricum for individuals with the early stages of a fever accompanied by a painful cough and sore chest; this remedy is most appropriate for individuals who feel exhausted and have night sweats but are not as red and hot as those who are appropriate for Belladonna; symptoms tend to worsen at night
- Kali muriaticum typically used for individuals with extremely swollen tonsils, but may also be useful for treating infectious mononucleosis when administered in conjunction with Ferrum phosphoricum

Professional homeopaths may also recommend the following remedies:

Mercurius — for individuals with a fever accompanied by profuse sweating, alternating hot and cold body temperature, weakness in the limbs and painful, aching bones, a bluish-red throat with a constant desire to swallow, excessive salivation, teeth marks around the

- edges of a swollen tongue, and tremendous thirst
- Phytolacca for pain caused by throat inflammation that radiates to the ears upon swallowing; the individual for whom this remedy is appropriate tends to have a high fever with chills and exhaustion; he or she may also be averse to hot drinks

Other helpful remedies include Lachesis, Conium, Hepar sulphuricum, and Baryta carbonica. A combination of homeopathy and Traditional Chinese Medicine (TCM) may effectively improve symptoms of mononucleosis. The most common homeopathic remedies used with TCM include Lycopodium, Silicea, Phosphorous, Sulphur, Mercurius, Nux vomica, Sepia, and Pulsatilla.

#### Acupuncture

No scientific studies have reviewed the use of acupuncture for mono; however, it may help to reduce symptoms, to improve immune function, and to relieve congestion (blockage of qi, or energy flow) of the liver, spleen, and lymph.

#### **Traditional Chinese Medicine**

Studies have shown that individuals with Epstein-Barr experience virus improvement in symptoms when given a combination of homeopathic remedies noted in the section on homeopathy and TCM remedies including Atractylodes Glycyrrhiza recens, Rehmannia preparata, Bupleurum, Cortex magnolia, Phragmites, Belamcanda, Sophora, subprostrata, Siler, alba, Angelica dahurica, Paeonia Dendrobium, Polygonatum officinal, and Cnidium.

#### Massage

No scientific studies have reviewed the use of massage for mono; however, it may help relieve the muscle aches and pains associated with chronic EBV infection and reduce stress. As discussed earlier, stress can increase a person's susceptibility to infections.

Prognosis/Possible Complications

Most people with mono recover uneventfully and can return to school of work in a few weeks. Fatigue can continue for months for a small percentage of people. Severe complications are uncommon, and may include problems with the central

nervous system or liver, rupture of the spleen, or difficulty breathing.

#### 103. Motion Sickness

Motion sickness a normal response to real, perceived, or anticipated movement. People tend to experience motion sickness on a moving boat, train, airplane, automobile, or amusement park rides. Although this condition is fairly common and only a minor nuisance for the occasional traveler, it may be incapacitating for people with an occupation that requires constant movement, such as a flight attendant, pilot, astronaut, or ship crew member. Symptoms generally consist of dizziness, fatigue, and nausea, which may progress to vomiting. Fortunately, most symptoms disappear once the journey is over.

### Signs and Symptoms

- Nausea
- Paleness of the skin
- Cold sweats
- Vomiting
- Dizziness
- Headache
- Increased salivation
- Fatigue

#### Causes

Motion sickness occurs when the body, the inner ear, and the eyes send conflicting signals to the brain. A moving vehicle such as a car, boat, airplane, or space shuttle generally provokes this reaction, but it may happen on flight simulators amusement park rides. From inside a ship's cabin, the inner ear may sense rolling motions that the eyes cannot perceive, and, conversely, perceive may the eyes movement on a "virtual reality" simulation that the not body does Interestingly, once a person adapts to the movement and the motion stops, symptoms may recur and cause the person to adjust all over again. In addition, even anticipating movement can cause anxiety and symptoms of motion sickness. For example, previous a person with a experience of motion sickness may become nauseous on an airplane before take-off.

#### Risk Factors

- Riding in a car, boat, airplane, or space shuttle
- Age—children between the ages of 2 and 12 are most at risk; occurrence of motion sickness declines with age (this is probably due to behavioral changes and coping strategies rather than anything inherent in the aging process)
- Susceptibility to nausea or vomiting
- Heightened level of fear or anxiety
- Exposure to unpleasant odors
- Poor ventilation
- Spending long hours at a computer screen
- Being outside of the earth's gravitational force

#### Diagnosis

Most people who have experienced motion sickness in the past ask their physician how to prevent another episode from occurring in the future; rarely will an individual arrive at his or her physician's office actually experiencing motion sickness. To establish a diagnosis of motion sickness, the provider will inquire about the individual's symptoms as well as the event that typically causes the condition (such as riding in a boat, flying in a plane, or driving in car). Laboratory tests are generally not necessary to establish a diagnosis of motion sickness.

#### **Preventive Care**

- Reduce anxiety and fears, particularly through methods such as cognitive-behavioral therapy
- Use head rests to minimize head movements
- Maintain proper ventilation to decrease foul odors that may cause nausea
- Stay occupied to distract the mind from thinking about motion sickness; reading may worsen symptoms, however
- Particular exercises, such as tumbling or jumping on a trampoline, may desensitize an

individual prior to being in a situation that causes motion sickness

Individuals who commonly experience motion sickness on a plane should take the following preventive measures:

- Avoid bulky, greasy meals and overindulgence in alcoholic beverages the night before air travel
- Eat light meals and/or snacks that are low in calories in the 24 hours before air travel
- Avoid salty foods and/or dairy products before air travel
- Sit toward the front of the aircraft or in a seat by the wing because the ride will feel smoother in these locations
- Eat foods high in carbohydrates before air travel

Individuals with a tendency toward motion sickness on a boat should take the following preventive measures:

- Passengers below the deck should keep their eyes closed and minds occupied
- Passengers on the deck should keep their eyes fixed on the horizon or visible land

# **Treatment Approach**

The goal for individuals who experience motion sickness on a regular basis or whose work is affected by their symptoms is to learn to control—and eventually prevent—these symptoms. This may be accomplished with mind/body practices, such as cognitive-behavioral therapy and biofeedback. Other alternatives to medication include homeopathy, acupuncture, ginger (Zingiber officinale), dietary adjustments, and physical therapy

#### Medications

- Scopolamine—most commonly prescribed medication for motion sickness; must be taken before the onset of symptoms; available in patch form that is placed behind the ear 6 to 8 hours before travel; effects last up to 3 days; side effects may include dry mouth, drowsiness, blurred vision, and disorientation
- Promethazine—take 2 hours before travel; effects last between 6 and 8

- hours; side effects may include drowsiness and dry mouth
- Cyclizine—most effective when taken at least 30 minutes before travel; not recommended for children younger than 6; side effects are similar to scopolamine
- Dimenhydrinate—take every 4 to 8 hours; side effects are similar to scopolamine
- Meclizine—most effective when taken 1 hour before travel; not recommended for children under 12; side effects may include drowsiness and dry mouth

## **Nutrition and Dietary Supplements**

Generally, small frequent meals are recommended for individuals prone to motion sickness. Dietary records of a small group of novice pilots also indicate that an increase in airsickness (motion sickness from air travel) may be associated with the following:

- Foods high in sodium (salt), such as preserved meats, corn chips, and potato chips
- Foods high in thiamine (vitamin B1), such as pork, beef, eggs, and fish
- High frequency of meals consumed 24 hours before air travel
- High-calorie foods
- Foods high in protein, such as milk, cheese, and preserved meat
- Low levels of vitamins A, C, and iron (female pilots with airsickness had a low average intake of these nutrients; it is still unclear whether increased dietary intake of these nutrients would diminish symptoms of motion sickness)

#### Herbs

# Ginger (Zingiber officinale)

Several studies suggest that ginger may be more effective than placebo in reducing symptoms associated with motion sickness. In a small study of volunteers who were given ginger (fresh root and powder form), scopolamine, or placebo, those receiving the medication demonstrated a significant reduction in symptoms compared to those who received ginger.

Other

Although black horehound (Ballota nigra) and peppermint (Mentha piperita) have not been scientifically studied for their use in treating motion sickness, some professional herbalists may recommend these herbs in combination to alleviate nausea associated with the condition.

Acupuncture

Some preliminary studies suggest people with motion sickness who receive acupuncture report a significant improvement in symptoms compared to receive sham acupuncture those who (needling at points not indicated for nausea, vomiting, or motion sickness) acupuncture at all.

Massage and Physical Therapy

One case study of a woman with motion sickness suggests that balance training and habituation (reducing or modifying one's response to a stimulus that causes motion sickness) may help diminish the symptoms of the condition. The use of habituation for the treatment of motion sickness is based on the theory that when an individual prone to motion sickness is repetitively exposed to the stimulus that causes motion sickness (such as driving in a car or riding on an elevator) in a controlled, supervised fashion, he or she will habituate, or become used to that stimulus. Over time, the stimulus will no longer evoke the motion sickness response and symptoms will diminish.

Homeopathy

Borax — for nausea caused by downward motions, such as landing in an airplane

Cocculus — the primary treatment for motion sickness, particularly if nausea and vertigo or other type of dizziness are present; symptoms tend to be worse in fresh air or from the smell and even thought of food

Nux vomica — for motion sickness accompanied by headache, nausea, and ringing in the ears; this remedy is most appropriate for patients who are sensitive to light, noise, and odors

Petroleum - for dizziness and nausea that occur when riding in a car or boat; this remedy is most appropriate for individuals who feel

faint, have pale skin and cold sweats, salivate excessively, and have a hollow aching in the stomach that is relieved by eating

Sepia \_\_\_ for motion sickness brought on by reading while in a moving vehicle

Tabacum — for motion sickness with severe nausea and vomiting; this remedy is most appropriate for individuals who feel faint, have pale skin, cold sweats, and a sinking feeling in the stomach; symptoms are aggravated by tobacco smoke, but open air and closing the eyes brings relief; vomiting may also bring relief

Mind/Body Medicine

**Biofeedback Training and Relaxation** 

Biofeedback instruments recorded skin temperature and changes in muscle tension while the pilots were exposed to a stimulus that caused motion sickness (sitting in a tilting, rotating chair). While in the chair, the pilots performed various relaxation techniques, such as deep muscle relaxation and mental imagery. Over time, the pilots habituated to the rotating chair; they no longer felt sick in the chair because they learned to relax in it.

Cognitive-Behavioral Therapy

The goal of cognitive-behavioral therapy is to alleviate the anxiety that some people experience simply thinking about movement or motion sickness. During cognitivebehavior therapy, individuals are exposed to a provocative stimulus (such as a tilting, rotating chair) in a slow, and controlled they experience some fashion until symptoms of motion sickness, but not until they are overwhelming. As the individual performs better and better on the rotating chair, his or her confidence builds and anxiety lessens.

**Breathing Techniques** 

People with motion sickness, those who were instructed to take slow, deep breaths had a significant reduction in symptoms of motion sickness compared to those who breathed normally or counted their breaths. Interestingly, involuntary rapid and shallow breathing often exacerbates symptoms of motion sickness. While it makes sense that slow, deliberate breathing would help

reduce the anxiety associated with motion sickness.

# **Traditional Chinese Medicine**

Pingandan

One small animal study suggests that Pingandan, a Chinese herbal mixture, may significantly reduce signs of motion sickness (including defecation, urination, salivation, panting, and drowsiness). Pingandan primarily consists of:

- White atractylodes rhizoma (Rhizoma atractylodis)
- Dried tangerine peel (Pericarpium citri reticulatae)
- Round cardamom fruit (Fructus amomi rotundus)
- · Hawthorn fruit (Fructus crataegi)
- Chinese eaglewood wood (Lignum aguilariae resinatum)

#### **Other Considerations Pregnancy**

Due to a lack of clinical evidence, there is some controversy regarding the safety of ginger taken during pregnancy. In one study of pregnant women, more than 70% reported less morning sickness while taking 250 mg of ginger 4 times per day compared to those who received placebo. Therefore, healthcare practitioners recommend limiting intake of ginger to this amount if used during pregnancy.

**Prognosis and Complications** 

While motion sickness has no long-term condition complications, the may devastating for those in an occupation that involves constant movement, such as a flight attendant, pilot, astronaut, or ship crewmember. People who infrequently may also become accustomed to movement during a trip lasting several days. Even those who travel often may improve from repeated exposures to the same type of experience.

# 104. Multiple Sclerosis (MS)

Multiple sclerosis (MS) is an unpredictable disease of the nervous system in which communication between the brain and other parts of the body is disrupted. Its effects can range from relatively benign in most cases to somewhat disabling to devastating. The symptoms mysteriously occur and then disappear. In the worst cases, a person with MS may be unable to write, speak, or walk. During an MS attack, inflammation occurs in areas of the white matter of the central nervous system in random patches called plaques. This is followed by destruction of myelin; the fatty covering that insulates nerve cell fibers in the brain and spinal cord. Myelin smooth, allows for the high-speed transmission of electrochemical messages between the brain, the spinal cord, and the rest of the body. When myelin is damaged, neurological transmission of messages may be slowed or blocked completely, resulting in diminished or lost function.

#### Signs and Symptoms

- Weakness in motor skills and loss of muscle coordination
- Tingling, numbness, dizziness
- Blurred vision
- Pain

- Heat sensitivity
- · Loss of bladder control
- Memory loss, problem-solving difficulties
- Mood disturbances

#### What Causes It?

The cause of MS is unknown. Theories include a childhood virus that primes the immune system for an attack against myelin in early adulthood.

# Who's Most At Risk?

- First-degree relatives with MS
- Age between 20 and 40
- Living in the northern latitudes for the first 15 years of life
- North European, North American, or Scandinavian ancestry
- Immune response genes

## What to be done

Take a history of clinical symptoms, check for neurological problems, and refer for lab tests, such as a cerebrospinal fluid exam and agar gel electrophoresis, and imaging procedures, such as a computed tomography scan (CT scan) and magnetic resonance imaging (MRI).

# **Treatment Options Treatment Plan**

The primary goal of a treatment plan is to reduce the severity of attacks through the use of certain medications and to extend the individual's physical functioning for as long as possible.

# **Drug Therapies**

- Steroids with anti-inflammatory properties to reduce severity of attacks
- Beta interferon to decrease myelin destruction, reduce frequency and severity of attacks, and slow progression of disease
- Immunotherapy, antigen-targeting, cytokines, and remyelination are experimental therapies that may alter the course of the disease

# Surgical and Other Procedures

Surgery may be used to treat severe and disabling tremors or to reduce severe spasms.

# Complementary and Alternative Therapies Nutrition

- Eat a diet high in protein and antiinflammatory oils (nuts, seeds, and cold-water fish); orange, yellow, and dark green vegetables; whole grains in small amounts
- Avoid food allergens such as wheat, dairy, eggs, soy, citrus, tomatoes, corn, chocolate, fish, and peanuts eliminate these foods, then reintroduce one at a time, watching for reactions. Many individuals with MS are sensitive to foods that contain gluten.
- Eliminate refined foods, alcohol, caffeine, saturated fats (animal products), and additives (MSG and aspartame)

# Potentially beneficial nutrient supplements include the following.

- Omega-6 oils (borage, evening primrose, black currant oils) 1,500 mg two to three times per day. Include zinc (30 mg per day) and selenium (200 mcg per day).
- B-complex vitamins, especially B<sub>12</sub>
   (1,000 mcg per day) and B<sub>6</sub> (100

- mg per day), and minerals, such as calcium (1,000 mg per day) and magnesium (500 mg per day)
- Vitamin C (250 to 500 mg twice per day), vitamin E (400 IU per day), and coenzyme Q10 (100 mg twice a day)

#### Herbs

Use one to two of the following: hawthorn (Crataegus monogyna) 200 mg two to three times per day, ginkgo (Ginkgo biloba) 120 mg two times per day standardized extract, especially with cognitive impairment, quercetin (100 to 250 mg three times per day), especially with food sensitivities. Combine the following herbs in equal parts to nourish the nervous system and prevent constipation: oatstraw (Avena sativa), skullcap (Scutellaria laterifolia), lavender (Lavendula angustifolia), lemon passionflower (Melissa officinalis). incarnata), and horsetail (Passiflora (Equisetum arvense). Drink two to three cups tea daily or take 30 to 60 drops tincture twice a day.

### Homeopathy

Combination remedies may be used for fatigue, spasm, and to help rid the body of impurities.

#### Acupuncture

Acupuncture may be used to alleviate symptoms.

#### Massage

Massage is important for maintaining flexibility and reducing spasticity, as well as improving the overall sense of well-being.

## **Prognosis/Possible Complications**

About 70 percent of patients experience attacks and remissions, and about half of these undergo a chronic, progressive worsening after about 10 years. Ten to fifteen percent of patients experience a chronic, progressive worsening of the disease from the initial onset. Fifteen to twenty percent of patients follow a benign course. Most MS patients live for 30 years or more, many still working and mobile.

#### Follow up

Patients need lifelong monitoring, especially during flare-ups.

Mumps is a highly contagious viral disease that causes painful swelling of the parotid glands, the largest of the three major salivary glands, located in the cheeks. The disease usually strikes children and adolescents, and is generally self-limited, which means that the virus usually clears up completely after running its course without long-term complications. A person develops lifelong protection against mumps after having the disease one time.

#### Signs and Symptoms

The following signs and symptoms accompany mumps:

- Swelling of the salivary glands in the face and jaw line
- Fever, chills, headache, loss of appetite, and a general feeling of discomfort
- Pain when chewing or swallowing
- Orchitis, or inflammation of the testicles (in up to 25% of males who get the disease after they reach puberty)

Symptoms usually start 14 to 24 days after infection with the virus.

#### What Causes It?

Mumps is caused by a virus (paramyxovirus) spread through infected saliva. Most symptoms are the result of direct infection of the salivary glands, testes, pancreas, eyes, ovaries, or kidneys. There may be central nervous system involvement as well.

#### Who's Most At Risk?

People who are not immunized, particularly children and adolescents, are at risk for developing mumps. Mumps most often occurs in children between 5 and 9 years of age.

#### What to be done

Check for swelling in the facial region, especially below the ear and above the jaw. Lab tests using samples from the throat, cerebrospinal fluid, blood, or possibly urine can reveal the presence of the virus. Routine hearing tests may be performed on young children to detect any temporary or, rarely, permanent loss.

# Treatment Options Prevention

Vaccination is the key preventing live mumps virus The mumps. approximately 95% effective in preventing the disease. The vaccine is available alone or as the combination vaccine of measlesmumps-rubella (MMR), and usually lasts at least 20 years with very few side effects. It is generally given at age 15 months, but may be given to adolescents and adults as well. Women should not be vaccinated during pregnancy and people with severe fever or allergies to eggs will need to discuss vaccination with their physician.

#### **Treatment Plan**

A person with mumps should be kept out of school or work for 7 to 10 days after symptoms begin, as he or she is considered contagious during that period. The patient should eat soft foods, avoid acidic foods and beverages, such as citrus or tomato products, and take pain relievers as needed. A male with swollen testicles should rest in bed until symptoms subside. Pain may be relieved with ice packs, or by supporting the scrotum with cotton or gauze, or an athletic supporter. Physician may perform a hearing test on young children who develop mumps, to detect any possible loss of hearing. If the patient develops pancreatitis with nausea and vomiting, the provider may administer IV fluids. Please see the monograph on Pancreatitis for further information.

# **Drug Therapies**

No medications other than pain relievers are needed for uncomplicated cases of mumps.

# Complementary and Alternative Therapies

There is a possibility that acupuncture may help clear up mumps faster; other CAM therapies may also support recovery by reducing symptoms.

## Nutrition

Avoid acidic foods; they can increase the release of enzymes from parotid glands. Drink lots of fluids in frequent small sips. Vitamin A, vitamin C, and zinc may help the immune system.

Herbs

To treat viruses in general, herbalists may recommend herbs that stimulate the immune system, reduce fever, and fight microbes. These include echinacea (Echinacea spp.), peppermint (Mentha piperita), onion yarrow cepa), (Achillea (Allium millefolium), elder (Sambucus nigra), and mullein (Verbascum thapsus). So far studies have not been done to determine whether these herbs can treat mumps specifically. To use any herbs safely and effectively, it is best to see a specialist trained in herbal medicine.

## Homeopathy

- Aconitum useful for childhood illnesses including the mumps, particularly when onset is sudden and the individual has a fever
- Belladonna most treatment for mumps, particularly if it comes on rapidly; this remedy is most appropriate for individuals who have a throbbing headache, flushed face, and burning sensations in the throat
- Mercurius for mumps with swelling that is worse on the right side, excessive foul-smelling perspiration and salivation
- Phytolacca for mumps in which glands feel swollen and hard; symptoms also include pale skin, a sore throat that radiates to the ear, pain when the tongue is extended, swallowing and difficulty (particularly hot foods)
- Pilocarpinum for mumps with excessive perspiration and salivation, as well as considerable thirst; some considered by

- homeopaths to be the best remedy for this purpose
- Pulsatilla for the later stages of mumps, especially in adults or children approaching puberty; this remedy is most appropriate for individuals who have a dry mouth and fever (but are not thirsty) and have mumps that involve the breasts, ovaries, or testicles: symptoms tend to worsen at night and in warm rooms; open air brings some relief
- Rhus toxicodendron for mumps with swelling that is worse on the left side; this remedy is most appropriate for individuals who have cold sores, sensitivity to cold temperature, and aching limbs that are worse at night and when the individual first begins moving from a rested position; aching limbs tend improve with continuous movement

#### Acupuncture

Acupuncture may make mumps less severe and shorten its course. However, it is difficult to test such claims since the mumps infection normally resolves on its own within 7 to 14 days.

# Prognosis/Possible Complications

For uncomplicated cases of mumps, the prognosis is excellent. Complications are more likely in individuals who have reached puberty and beyond; these may include meningoencephalitis, deafness, orchitis, pancreatitis, and miscarriage in early pregnancy.

# 106.Muscular Dystrophy (MD)

Muscular dystrophy (MD) is a group of genetic diseases involving progressive weakness and degeneration of the muscles that control movement. In some forms of MD, the heart muscles and other involuntary muscles, as well as other organs, are also affected. There are nine distinct types of MD, with myotonic the most common form among adults and Duchenne the most common form among

children (it affects only boys). MD is an incurable, often fatal disease.

#### Signs and Symptoms

The following signs and symptoms accompany myotonic muscular dystrophy.

- · Delayed muscle relaxation after contraction
- Impaired nourishment of nonmuscular tissue

- Weaknesses in the facial muscles, arms and legs, and muscles affecting speech and swallowing
- Baldness in men and women
- · Intellectual impairment
- Respiratory problems
- Heart abnormalities in early adulthood

Although Duchenne MD is present at birth, signs and symptoms do not usually appear until the child is 3 to 5 years of age. They include the following.

- Frequent falls
- Difficulty running, jumping, and getting up from a sitting or lyingdown position
- Large calf muscles
  - Weakness in the lower extremities
  - Mild mental retardation

#### What Causes It?

MD is caused by gene mutations that are particular to each form of the disease.

#### Who's Most At Risk?

In two-thirds of cases of MD, the person has a family history. In one-third of cases, there is no family history.

#### What to be done

Diagnosis depends on sophisticated testing, such as lab tests, imaging, and other procedures.

# **Treatment Options**

#### **Treatment Plan**

The goal of a treatment plan is to maintain the person's optimal physical and emotional health by preventing joint and spinal deformities, which prolongs the ability to walk for as long as possible. Assisted breathing is introduced as needed, and lifelong physiotherapy is necessary. Orthopedic devices may be needed for support. Hydrotherapy, such as continuous tub baths, may help maintain a full range of joint motion.

# **Drug Therapies**

- Phenytoin, quinine, and procainamide, for delayed muscle relaxation in myotonic MD
- Prednisone, to improve muscle strength in Duchenne MD

#### Surgical and Other Procedures

- Spinal surgery to correct scoliosis (curvature of the spine)
  - Tenotomy to release contractures (painful positioning of the joints) of

the hips, knees, and Achilles tendon, which is near the back of the foot.

# Complementary and Alternative Therapies

#### Nutrition

Follow an anti-inflammatory diet, including organic whole foods such as whole grains, vegetables, fruit, legumes, sea vegetables, and essential fatty acids (nuts, seeds, and cold-water fish). Avoid refined foods, saturated fats (dairy and other animal products), and all known food allergens. Potentially beneficial nutrient supplements include the following.

- Essential fatty acids (for example, flax, borage, evening primrose, cod liver) 1,000 to 1,500 mg two to three times per day
- Vitamin E (400 to 800 IU per day), selenium (100 to 200 mcg per day), coenzyme Q10 (100 mg one to three times per day)
- L-carnitine (320 mg one to two times per day)
- B-complex vitamins, especially B12 (1,000 mcg per day) and B6 (100 mg per day), and minerals, such as calcium (1,000 mg per day), magnesium (500 mg per day), and potassium (100 mg per day)
- N-acetyl cysteine (500 mg twice a day)
- Creatine (5 to 7 g per day)

#### Herbs

Combine three of the following herbs in equal parts and add two to three others as needed:

- Mineral-rich herbs: horsetail (Equisetum arvense), nettles (Urtica dioica), oatstraw (Avena sativa), and kelp (Laminaria cloustonii)
- With spasm, add black cohosh (Cimicifuga racemosa), cramp bark (Viburnum opulus)
- With muscle pain, add Jamaica dogwood (Piscidia erythrina), meadowsweet (Filipendula ulmaria)
  - If the heart is affected, add hawthorn (Crataegus monogyna), rosemary (Rosemarinus officinalis)

# Homeopathy

• Arnica — for relief from muscle pain or spasm

- Calcarea carbonica for cramps of the lower extremities, particularly in those who are overweight and easily chilled
- Magnesia phos for muscle pain and spasm with cramps and severe, shooting pain

Massage

Regular massage is important for reducing spasm and muscle contractions.

Prognosis/Possible Complications

The outlook for people with MD varies, depending on the type and severity of the disease. In mild cases, the disease may progress slowly and the person may have a normal lifespan, while in more severe cases, there is a more marked progression of muscle weakness, functional disability, and loss of ability to get around. Duchenne MD patients usually live in there twenties, and myotonic MD patients usually live into there forties or fifties. In most cases, individuals with MD die of infections. respiratory problems, or cardiac failure.

Follow up

MD patients annually undergo electrocardiography, pulmonary function studies, and chest radiographs, along with tests to monitor their swallowing function.

# 107. Myeloproliferative Disorders; Bone Marrow Disorders; Chronic Myelogenous Leukemia; Myelofibrosis; Polycythemia Vera; Thrombocytosis

Myeloproliferative disorders are a of conditions that cause group overproduction of blood cells - platelets, white blood cells, and red blood cells - in bone marrow. Though myeloproliferative disorders are serious, and may pose particular health risks, individuals with these conditions often live for many years after diagnosis.

Myeloproliferative disorders include:

- Polycythemia vera overproduction of blood cells (particularly red blood cells) by the bone marrow
- Essential thrombocytosisoverproduction of the platelet cells, the cells that promote blood clotting
- Primary or idiopathic myelofibrosis (also known as myelosclerosis)overproduction of collagen fibrous tissue in the bone marrow; impairs bone marrow's ability to produce blood cells
- Chronic myelogenous leukemia (CML)-cancer of the bone marrow abnormal produces granuloctyes (a type of white blood cell) in the bone marrow

Signs and Symptoms

Many individuals with myeloproliferative disorders have no symptoms at all when their physicians first make the diagnosis. A that common is inyeloproliferative disorders is an enlarged spleen, which can lead to abdominal pain

and a feeling of fullness. Some signs and symptoms specific to the different types of myeloproliferative disorders include:

Polycythemia Vera

- Fatigue, general malaise
- Difficulty breathing
- Intense itching after bathing in warm water
- Stomach aches
- Purple spots or patches on the skin
- Nosebleeds, gum or stomach bleeding, or blood in the urine
- Throbbing and burning pain in the skin, often with darkened, blotchy areas
- Headache and visual disturbances
- High blood pressure
- Blockage of blood vessels; may cause heart disease, stroke, or gangrene (tissue death) of the extremities

## Essential thrombocytosis

- Heart attack or stoke
- Headache
- Burning or throbbing pain, redness, and swelling of the hands and feet
- Bruising
- Gastrointestinal bleeding or blood in the urine

# Primary myelofibrosis

- Fatigue, general malaise
- Difficulty breathing
- Anemia

- Weight loss
- · Fever and night sweats
- · Abnormal bleeding

Chronic myelogenous leukemia (CML)

- · Fatigue, general malaise
- · Weight loss or loss of appetite
- Fever and night sweats
- Bone or joint pain
- Heart attack or stroke
- · Difficulty breathing
- Gastrointestinal bleeding
- Infection

#### Causes

All myeloproliferative disorders arise from an overproduction of one or more types of cells. The reason for this abnormal increase in cells is largely unknown, but there are some theories as to why they occur. These include:

- Genetics some individuals with CML have an abnormally shortened chromosome known as the Philadelphia chromosome
- Environment some studies indicate that myeloproliferative disorders may result from an overexposure to radiation, electrical wiring, or chemicals

#### **Risk Factors**

The following risk factors may increase an individual's risk for developing a myeloproliferative disorder:

#### Polycythemia Vera

- Gender men are two times more likely than women to develop the condition
- Age individuals older than 60 are most likely to develop the condition, though it may occur at any age
- Environment exposure to intense radiation may increase an individual's risk for the condition

#### **Essential thrombocytosis**

- Gender women are 1.5 times more likely than men to develop the condition
- Age individuals older than 60 are most likely to develop the condition, though 20% of those with this condition are under 40.
- Environment exposure to chemicals in hair dyes or to

electrical wiring may increase an individual's risk for the condition

# Primary myelofibrosis

- Gender men are slightly more likely than women to develop the condition
- Age individuals between the ages of 60 and 70 are most likely to develop the condition
- Environment exposure to petrochemicals (such as benzene and toluene) and intense radiation may increase an individual's risk of developing the condition

# Chronic myelogenous leukemia (CML)

- Gender men are more likely than women to develop the condition
- Age individuals between the ages
   45 and 50 are the most likely to develop the condition
- Environment exposure to intense radiation may increase an individual's risk of developing the condition

#### **Diagnosis**

A sign is an enlarged spleen, which can be detected during a routine physical examination. In addition to performing a physical exam, the physician may also conduct the following procedures to diagnose a myeloproliferative disorder:

- Blood tests detect abnormal types or numbers of red or white blood cells; can also detect anemia and leukemia
- Bone marrow biopsy sample of bone marrow may be taken after blood tests; indicates the presence of abnormal types or numbers of red or white blood cells; may detect certain types of anemia and cancer in the marrow

**Treatment Approach** 

The approach to treatment for each type of myeloproliferative disorder is slightly different:

- Polycythemia vera lower red blood cell count by removing blood (phlebotomy)
- Essential thrombocytosis treat symptoms, when present, medications

- Primary myelofibrosis treat symptoms, when present, with medications
- CML bone marrow transplant offers the only hope for a cure; some medications (such as interferon) are used experimentally and preliminary studies suggest that vitamin A (combined with medications) may improve survival rates

#### Medications

An individual's diagnosis and symptoms will determine the type of medication that a physician prescribes. Some possible medications include:

## Polycythemia Vera

- Hydroxurea reduces number of platelets
- Salicylates (such as aspirin) reduces skin redness and burning, and lowers increased temperature that may occur with the condition
- Antihistamines decreases itching
- Allupurinol reduces symptoms of gout, a potential complication of polycythemia vera

## Essential Thrombocytosis

- Aspirin low doses may treat headache and burning pain in the skin
- Hydroxyurea reduces the number of blood platelets
  - Aminocaproic acid reduces bleeding; may be used prior to a surgical procedure to prevent bleeding as well

# Primary myelofibrosis

 Hydroxyurea – may control complications, such as enlargement of the liver and spleen, reduce the number of white cells and platelets in the blood, and improve anemia

# Chronic myelogenous leukemia (CML)

- Hydroxyurea reduces number of white blood cells
- Allopurinol can prevent gout, a potential complication of CML
- Interferon helps the immune system to combat cancer cells; used only if bone marrow transplant is not an option
- Chemotherapies, such as cytarabine and daunorubicin – helps the

immune system to combat cancer cells; there are newer agents that are under investigation as well

## Surgery and Other Procedures

In the case of primary myelofibrosis, CML, and late stage polycythemia vera, blood formation occurs in sites other than the bone marrow, such as the liver and spleen, causing enlargement of these organs. When enlargement of the spleen becomes painful, a surgeon may perform a splenectomy to remove this organ. In very serious cases of primary myelofibrosis, surgeons may replace the abnormal stem cells in the bone marrow with healthy stem cells. This type of procedure, called a stem cell transplant, carries a high degree of risk. Another procedure, called a bone marrow transplant, is ideal for most individuals with CML. After either type of transplant, the healthy bone marrow cells circulate and begin to grow and produce healthy blood cells. Phlebotomy may prevent the accumulation of blood and decrease the risk of stroke in individuals with polycythemia vera.

## **Nutrition and Dietary Supplements**

Preliminary studies suggest that nutritional supplements may reduce the symptoms of some myeloproliferative disorders. These nutritional supplements include:

#### Vitamin A

CML, chemotherapy combined with vitamin A may be significantly more effective than chemotherapy alone in improving an individual's chance of survival. Vitamin A may inhibit tumor growth in cancer cells.

#### Vitamin K

Synthetic vitamin K inhibits the growth of CML cells and enhances the effect of the chemotherapy drug, doxorubicin. Some researchers speculate that taking vitamin K while undergoing chemotherapy with doxorubicin may increase an individual's chance of survival with minimal toxic side effects. More research is needed, however, to confirm this theory.

#### Herbs

Although herbs have not been scientifically investigated specifically for the treatment of myeloproliferative disorders, a trained specialist may recommend the following to improve symptoms associated with the conditions:

# Frankincense (Boswellia carteri)

Laboratory studies indicate that this traditional Chinese herb, normally used for improving blood circulation and relieving pain, may inhibit the growth of cancer cells. These effects, however, have been observed only in the laboratory, and may not translate to human patients.

#### Other Considerations

#### Pregnancy

The drug hydroxyurea, when used to treat myeloproliferative disorders, may pose a risk to a developing fetus and should be avoided by pregnant women.

### **Prognosis and Complications**

Myeloproliferative disorders are slow acting, and don't always cause life-threatening symptoms. The complications of these illnesses however may be serious. Some complications include:

- Enlargement of the spleen and liver
- Gout
- Anemia

- Bleeding
- Kidney or liver failure
- Heart attacks or stroke
- Infection
- CML can transform into acute leukemia, a more toxic condition

serious cases, such as primary myelofibrosis, may be fatal within 3 to 6 years. Individuals with CML have a median survival rate of 4 to 5 years after diagnosis. If CML transforms into acute leukemia. however, the median survival rate is only three months. Those with other types of myeloproliferative disorders can live much longer, especially if they are diagnosed Individuals with thrombocythemia have a near normal life expectancy with only a low risk of developing cancer. Polycythemia vera has a survival rate of between 10 and 20 years, with the longest survival occurring in the younger age groups.

# 108.Myocaridal Infarction; Heart Attack (MI)

A heart attack occurs when an artery leading to an area of the heart becomes completely blocked. This blockage leads to the death of heart muscle cells in that area. A heart attack is a medical emergency. Seek immediate medical attention if you or someone you are with is having the symptoms listed in the section below. If treatment is sought promptly, lives can be saved and threatened heart muscle can be salvaged. This prevents as much damage to the heart and preserves as much function as possible.

#### Signs and Symptoms

- Pain, heaviness, tightness, burning—in chest, back, left arm, jaw, neck
- · Difficulty breathing
- · Dizziness, weakness
- Nausea, vomiting
- Irregular heartbeat

#### Causes

Most heart attacks are caused by a combination of the following:

- A blood clot that blocks one of the coronary arteries
- Rupture of unstable plaque (atherosclerosis)

"Endothelial dysfunction"

Endothelial cells line the inner wall of coronary blood vessels. When these cells become disturbed (from, for example, eating a high fat meal, sudden stress, or high blood pressure), a piece of atherosclerotic plaque can dislodge and land in a narrow section of a coronary artery. When this happens, blood flow is blocked and can cause severe chest pain or even a heart attack. Atherosclerosis, plaque rupture, and endothelial dysfunction can also stimulate the formation of a blood clot, which, in turn, interrupts blood flow and leads to a heart attack. When a coronary artery is blocked the lack of blood and oxygen to the heart muscle leads to the death of heart cells in that area. The damaged heart muscle loses its ability to contract, and the remaining intact heart muscle needs to compensate for that area of weakness. Endothelial dysfunction seems to be related to reduced levels of a substance called nitric oxide. Normal levels and function of nitric oxide help the coronary blood vessels relax and dilate. When these vessels are relaxed, there is more blood flow to the heart. Oxidative stress (a normal but damaging metabolic process in the body

exacerbated by environmental factors such as exposure to cigarette smoke and pollutants) reduces the availability and function of nitric oxide, thereby reducing the ability of the coronary blood vessels to relax. In theory, therefore, antioxidants (like carotenoids and vitamins C and E) in the diet or possibly from supplements may improve amounts and function of nitric oxide. This, in turn, improves blood flow and reduces the chances of a heart attack.

## Risk Factors

Occasionally, sudden overwhelming stress can trigger a heart attack. Other common risk factors include:

- Smoking
- High-fat diet
- Poor blood cholesterol levels, especially high LDL ("bad") cholesterol and low HDL ("good") cholesterol as well as elevated triglycerides
- Family history of early MI
- Diabetes
- High blood pressure
- Being male, or a female who has gone through menopause
- Being overweight/obese (which also increases your risk for having high cholesterol, diabetes, and high blood pressure)
- Sedentary lifestyle

Additional risk factors for coronary artery disease include elevated homocysteine, Creactive protein (CRP), lipoprotein (a), and fibrinogen levels. CRP and fibrinogen are markers of inflammation. There is some thought that chronic infection may be involved in development the atherosclerosis and the risk of having a heart attack. Lots of research in these areas is currently underway. If you have had a heart attack and you have a high homocysteine level, the likelihood of a bad outcome is greater than for those with a normal or-low homocysteine level. High homocysteine can be treated with folic acid.

Use of birth control pills, cocaine, or amphetamines may also increase your chances for a heart attack. And, certain psychological factors, listed below, have been linked to heart attacks and a worse outcome from a heart attack:

Depression

- Anger and hostility
- Social isolation and lack of social support
- Chronic (ongoing) stress

It is now known whether treatment of these conditions and change of such situations will lessen your chances for a first time or repeat heart attack. However, it certainly seems reasonable to work on addressing these feelings and circumstances.

#### Diagnosis

Treating a heart attack within 90 minutes can save life. In the emergency room, a physician will ask about symptoms and perform a physical examination. The following tests may reveal a heart attack and the extent of heart damage:

- Electrocardiogram (ECG) -- single or repeated over several hours
- Echocardiography
- Nuclear ventriculography (MUGA or RNV)

The following tests may show the byproducts of heart damage from a heart attack:

- Troponin I and troponin T
- · CK and CK-MB

Coronary angiography may be necessary to assess and treat the blocked coronary vessels.

#### **Preventive Care**

- Avoiding known risk factors like cigarette smoking or exposure to secondhand smoke.
- Getting aerobic exercise (such as walking, biking, or swimming) for at least 3 hours per week (for example, 30 minutes 6 days per week). If you haven't exercised much in the past, walking is a great way to start.
- Reducing stress and learning stressreduction techniques such as deep breathing and meditation. Yoga and Tai chi, two forms of exercise that emphasize stretching, breathing, and meditating, can also help you reduce your stress level.
- Eating a low-fat diet rich in antioxidants (like carotenoids, flavonoids, vitamins C and E) as well as fiber and stay at the proper weight for your height and age.

If you have high cholesterol, diabetes, or high blood pressure, follow your physician's instructions to keep these risk factors under control. Often, medications are necessary in addition to lifestyle changes. If you don't have heart disease yet or have not had a heart attack despite these risk factors, aggressive control can help prevent a problem from developing. And, if you have heart disease, aggressive already control of these risk factors can prevent further heart attacks or other problems related to heart disease. Some studies have healthy individuals that consume higher amounts of folic acid (vitamin B9) and vitamin B6 are less likely to develop atherosclerosis than those who consume lower amounts of these vitamins.

The AHA does not currently recommend population-wide homocysteine screening, and suggests that folic acid, as well as vitamins B6, B12, and betaine requirements be met through diet alone. Individuals at high risk for developing atherosclerosis, however, should be screened for blood levels of homocysteine. If elevated levels are detected, a healthcare practitioner may recommend supplementation.

**Treatment Approach** 

The goal when treating a heart attack is to resume blood flow to the affected area of heart immediately. When promptly, heart muscle tissue and function can be preserved as much as possible. Three methods for doing this are drug therapy, angioplasty (using one of several methods to clear the blocked blood vessel, such as inflating a balloon inside it or holding it open with a device called a stent), and surgery. Once treated acutely for a heart attack, changing lifestyle factors and taking medications as prescribed as well possibly, supplements is very important for avoiding recurrent heart attacks and even death. Certain herbal remedies as well as relaxation techniques may also considered.

Lifestyle

Attending cardiac rehabilitation following a heart attack can significantly improve many of risk factors for heart disease, including high cholesterol, high blood pressure, extra weight, high homocysteine, and elevated Creactive protein. This improvement, in turn, lowers your chances for repeat heart attacks.

Cardiac rehabilitation programs generally involve comprehensive education on diet. physical activity, and relaxation with participation in a supervised exercise and stress reduction program. To maintain the positive effects on both your risk factors and your heart, you must continue to follow the taught habits in healthy rehabilitation, like exercise and eating properly, beyond the structured program (which usually lasts 3 months). The AHA recommends that you eat the following to prevent the occurrence of a heart attack:

- A variety of fruits and vegetables (5 to 9 servings/day)
- A variety of grain products, with an emphasis on whole grains (6 or more servings/day)
- At least 2 servings of fish per week
- Limited total fat intake to <30% and saturated fat to <7% of energy. Replace dietary saturated fats and trans fatty acids (for example, hydrogenated oils and fried foods) with monounsaturated and polyunsaturated fats (including foods rich in omega-3 fatty acids). Food sources of omega-3 fatty acids include fatty fish (such as salmon), flaxseed and flaxseed oil, soybean oil, canola oil, and nuts.
- Limited amounts of dairy products to low-fat or fat free items (2 to 4 servings/day)
- Limited sodium intake to 6 grams per day
- Limited alcohol intake to 2 drinks/day for men and 1 drink/day for women
- Maintain a healthy body weight by matching calorie intake to energy needs; this includes a moderate level of regular physical activity (30 to 60 minutes within your target heart range most days per week)

Medications

Aspirin and nitroglycerin are essential for improving blood flow. Nitroglycerin does so by widening the blocked artery, while aspirin does so by thinning the blood and preventing the formation of blood clots. Your physician may also prescribe one of several blood thinners listed below to improve blood flow in the blocked artery.

- Streptokinase (SK)
- Tissue plasminogen activator
- Anisoylated plasminogens streptokinase activator complexmore expensive but longer anticlotting activity than streptokinase

Heparin

Additional medications needed during acute treatment of a heart attack include:

- Beta blockers-reduce cardiac rupture, new heart attacks, irregular heart beat; various side effects
- Angiotensin-converting enzyme (ACE) inhibitors—reduce high blood pressure
- Pain control—morphine sulfate, intravenous
  - Oxygen—by a tube inserted into your nose, as needed

After the emergent treatment of a heart attack, there are number of medications that will be continued or considered by your physician to improve your risk factors and lower your chances of having another heart attack. Cholesterol lowering drugs, betablockers to decrease the workload of the heart, ACE inhibitors, other blood pressure medications, and aspirin or another type of blood thinner are amongst the possible drugs he or she will recommend.

**Nutrition and Dietary Supplements** Diets for People with High Cholesterol

The National Cholesterol Education Program (NCEP) recommends saturated fat intake of no more than 7% of total calories, cholesterol limited to less than 200 mg/day, little to no trans fatty acids (such as fried and partially hydrogenated foods), intake of both plant stanols/sterols (2 grams/day) and soluble fiber (10 to 25 grams/day), weight loss, and exercise. Studies have also shown that replacing dietary animal protein with soy protein may reduce total cholesterol, LDL ("bad") cholesterol, and triglycerides (a major form of fat in the blood) without affecting HDL ("good") cholesterol levels. The AHA also recommends a diet high in unsaturated fat diet rather than a very lowfat diet for individuals with a condition called "metabolic syndrome" marked by high triglycerides, low HDL cholesterol, obesity, high blood pressure, and/or diabetes).

#### Diets for People with High Blood Pressure

The Dietary Approaches to Hypertension (DASH) emphasizes a diet rich in fruits, vegetables, and low-fat or non-fat dairy products to provide high intake of potassium, magnesium, calcium sources. Sodium intake should be less than 6 g/day. Weight loss, regular physical activity, and limiting of alcohol intake are also very important factors for lowering blood pressure.

#### Mediterranean Diet

The Mediterranean Style Diet is comprised of whole grains, fresh fruits and vegetables, fish, olive oil, and moderate, daily wine consumption. Unlike the AHA diets, the Mediterranean Style Diet is not low in all fats; it is low in saturated fat but high in monounsaturated fatty acids. In a long-term study of 423 patients who suffered a heart attack, those who followed a Mediterranean Style Diet had a 50% to 70% lower risk of recurrent heart disease compared with controls who received no special dietary counseling. The intervention emphasized bread. root and green vegetables, daily intake of fruit, fish and poultry, olive and canola oils, margarine high in alpha-linolenic acid (an omega-3 polyunsaturated fatty acid found in flaxseed, walnuts. and canola oil), along discouragement of ingestion of red meat and total avoidance of butter and cream.

# Supplements and Vitamins

#### Bromelain

Bromelain, which has anti-inflammatory properties and antithrombotic properties (meaning that it may prevent blood clot formation), may prove to have a useful role in treating angina and preventing heart attacks.

## Coenzyme Q10

Researchers believe that the beneficial effect of CoQ10 in the prevention and treatment of heart disease is due to its ability to improve energy production in cells, inhibit blood clot formation, and act as an antioxidant. One important study, example, found that people who received daily CoO10 supplements within 3 days of a heart attack were significantly less likely to experience subsequent heart attacks and chest pain. In addition, these same patients

were less likely to die of heart disease than those who did not receive the supplements.

# Folic Acid, Vitamin B6, Vitamin B12, Betaine

Many studies indicate that patients with amino the levels of elevated homocysteine are more likely to develop Homocysteine coronary artery disease. levels are strongly influenced by dietary factors, particularly vitamin B9 (folic acid) along with vitamin B6, vitamin B12, and betaine. Folic acid, along with these other B vitamins, breaks down homocysteine in the body. Therefore, taking a multivitamin with adequate vitamin B complex, particularly folic acid (at least 400 micrograms) can be very helpful if you have heart disease. Talk to your doctor about folic acid and the other B vitamins. Be sure to ask whether you should take folic acid or other vitamin B supplements and how much he or she thinks you should take. Some doctors recommend higher amounts of folic acid when you already have heart disease, especially if you have an elevated homocysteine level. Blood tests to follow how your homocysteine level responds to folic acid supplements may be performed. This helps determine just the right amount of folic acid for you.

#### L-Carnitine

Studies suggest that people who take Lcarnitine supplements soon after suffering a heart attack may be less likely to have a subsequent heart attack, die of heart disease, experience chest pain and abnormal heart rhythms, or develop congestive heart failure. In addition, people with coronary artery disease who use L-carnitine along with standard medications may be able to sustain physical activity for longer periods of time.

# Magnesium

Magnesium is essential to heart health. This is particularly important maintaining a normal heart rhythm and is often used by physicians to treat an irregular heartbeat (arrythmia). Results of studies using magnesium to treat heart attack survivors, however, have been inconsistent. Some studies have reported reduced death rates as well as fewer arrhythmias and improved blood pressure when magnesium is used as part of the treatment following a heart attack. In a hospital setting, if you have had a heart attack, the doctor will

determine if magnesium supplementation, either intravenously or orally, is necessary.

# **Omega-3 Fatty Acids**

There is strong evidence those omega-3 fatty acids from fatty, cold-water fish (namely EPA and DHA) can help prevent and treat arteriosclerosis by inhibiting the development of plaque and blood clots. In fact, taking omega-3 fatty acid supplements every day after a heart attack may reduce your risk of a subsequent heart attack or a stroke and improve your chances survival. Because omega-3 fatty acids from fish oil can thin your blood, care MUST be taken if using these supplements conjunction with blood thinners like warfarin. Talk to your doctor before using such supplements. If you are on warfarin and taking omega-3 fatty acids, your bleeding time should be followed very closely. Other foods rich in another kind of omega-3 fatty acid called alpha-linolenic acid (ALA) are walnuts, flaxseeds, soybeans, pumpkin seeds, and flaxseed, canola (rapeseed), soybean, and walnut oils. Walnuts, and possibly other food sources of ALA, may help improve endothelial function. Omega-3 fatty acids can also help improve certain risk factors for heart disease like high blood pressure, high cholesterol, and depression.

#### Selenium

Low levels of selenium in your body may worsen atherosclerosis or even increase your chances for a heart attack. It is not however, whether selenium supplementation can prevent either a heart attack or development and progression of atherosclerosis. Although animal studies suggest that selenium might have such positive benefits, research in people is needed. Some researchers are concerned, however, that selenium supplements may minimize of cholesterol the benefits lowering drugs.

## Vitamin C

While not all of the studies agree, some information suggests that vitamin C may help protect blood vessels from damaging effects that lead to or result from atherosclerosis. For example, those with low levels of vitamin C may be more likely to have a heart attack, stroke, or peripheral artery disease. In terms of damage that can cause atherosclerosis, some studies have shown that vitamin C helps prevent oxidation of LDL (bad) cholesterol (a process that contributes to plaque buildup in the arteries) as well as other negative outcomes related to oxidative stress and improve endothelial dysfunction. Under most circumstances, dietary vitamin C is adequate for protecting against the development of or consequences from cardiovascular disease. If you have low levels of this nutrient, however, and find it difficult to obtain through dietary sources, a knowledgeable physician may recommend vitamin C supplements.

#### Vitamin E

Vitamin E helps prevent arteries from clogging by blocking the conversion of cholesterol into the waxy fat deposits called plaque that stick to blood vessel walls. Vitamin E also thins the blood, allowing for blood to flow more easily through arteries even when plaque is present and it may work together with other antioxidants to improve endothelial function. Many experts conclude, therefore, that obtaining vitamin E through dietary sources, along with other antioxidants from foods, is the way to go for preventing heart disease and its consequences. Supplements do not appear, at this time, to be necessary.

#### Herbs

Herbs should not be used in place of IMMEDIATE medical attention for a heart attack. Herbs can be used as general heart tonics and for the treatment of conditions associated with MI, like atherosclerosis, congestive heart failure, high cholesterol levels, high blood pressure, and obesity.

# Bilberry (Vaccinium myrtillus) and other Flavonoids

A close relative of the cranberry, bilberry fruits contain flavonoid compounds called anthocyanidins. plant Flavonoids are pigments that have excellent antioxidant properties. This means that they scavenge damaging particles in the body known as free radicals and may help prevent a number of long-term illnesses including disease and diabetes. Animal studies have found that anthocyanidins and other flavonoids including quercetin, resveritrol, catechins high (all found concentration in red wine) may strengthen blood vessels, improve circulation,

prevent the oxidation of LDL ("bad") cholesterol. Research in people is needed.

## Dong Quai (Angelica sinensis)

When used in combination with ginseng (Asian ginseng) and astragalus (Astragalus membranaceus), dong quai decreased symptoms of chest pain and improved exercise tolerance in a small group of people with heart disease. Talk to your doctor about whether use is safe and appropriate for you.

## Garlic (Allium sativum)

Studies suggest that fresh garlic and garlic supplements may prevent blood clots and destroy plaque. Garlic may also improve risk factors for heart disease, including high blood pressure, high cholesterol, and diabetes. An animal study suggests that garlic may help lower homocysteine levels as well. If you take aspirin or other blood thinners (like warfarin [Coumadin], ACE inhibitors, sulfonylureas for diabetes, or statins for high cholesterol, take care before using garlic supplements. Often adding garlic to your diet is enough.

#### Ginseng, Asian (Panax ginseng)

Ginseng is considered an adaptogen, meaning that this herb can help you and your body cope with stress. Ginseng, especially Asian ginseng, may reduce endothelial cell dysfunction, thereby rendering a heart attack less likely. Ginseng may also help raise HDL (the good cholesterol), while reducing total cholesterol levels. Ginseng may thin blood and, therefore, should not be used with warfarin (Coumadin) unless advised and followed closely. In addition, ginseng should NOT be used if you have high blood pressure unless specifically instructed by a qualified practitioner.

#### Green Tea (Camellia sinensis)

Population studies indicate that the antioxidant properties of green tea may prevent atherosclerosis, particularly in the coronary arteries. In addition, although much more research is needed, it may help to lower cholesterol and weight.

# Gugulipid (Commiphora mukul)

Used in Ayurvedic medicine to treat high cholesterol levels. Certain ingredients in this herbal remedy may have antioxidant properties and may therefore convey health benefits similar to hawthorn, garlic, and green tea.

# Hawthorn (Crataegus monogyna)

for Used traditionally as a remedy and diseases. Animal cardiovascular laboratory studies demonstrate that this herb has antioxidant properties that help protect against the formation of plaques and may help control high cholesterol and high blood pressure.

## Pseudo ginseng root/notoginseng root (Panax notoginseng)

Used in Traditional Chinese Medicine to treat chest pain and coronary artery disease. This herb may help prevent blood clots and protect against the formation of plaques.

#### Turmeric (Curcuma longa)

Early studies suggest that turmeric may prove helpful in preventing the build up of atherosclerosis in one of two ways. First, in animal studies an extract of turmeric lowered cholesterol levels and inhibited the oxidation of LDL ("bad") cholesterol. Oxidized LDL deposits in the walls of blood vessels and contributes to the formation of atherosclerotic plaque and to disruption of the blood vessel wall. Turmeric may also prevent platelet build up along the walls of an injured blood vessel. Platelets collecting at the site of a damaged blood vessel cause blood clots to form and blockage of the artery. Studies of the use of turmeric to prevent or treat heart disease in people would be interesting in terms of determining if these mechanisms discovered in animals apply to people at risk for this condition.

#### Homeopathy

Homeopathy should NEVER instead of immediate medical attention for a heart attack. Homeopathy may, however, be used to help reduce risk factors for heart disease and its consequences.

#### Acupuncture

Acupuncture may be useful for reducing risk factors for heart disease. It is considered an excellent treatment for people who wish to quit smoking and it may aid in weight loss as well as cholesterol and blood pressure reduction. Acupuncture may also help to recover more quickly from a heart attack, particularly if by pass surgery was necessary.

#### Massage and Physical Therapy

Although few studies have examined the effectiveness of massage therapy for heart disease, massage has a relaxing effect and hormone levels. stress-related reduces

Lowering stress hormone levels can lower cholesterol and blood pressure and may, therefore, prove to be beneficial for reducing your risk of heart disease. In addition, relaxation techniques may help to comply with habits necessary to reduce the risk of heart disease, such as dieting, quitting smoking, and exercising. Also, study has found that massage can lower blood pressure.

#### Mind/Body Medicine

There is some evidence that the use of prayer may help you recover more quickly and successfully from a heart attack. In fact, a few studies conducted suggest that you don't have to be the one praying. Others. even people you don't know, praying for you may translate into clinical benefit. This is called intercessory prayer or distance healing.

## **Other Considerations Prognosis and Complications**

The expected outcome varies with the amount and location of damaged tissue. The outcome is worse if there is damage to the electrical conduction system (the impulses responsible for guiding heart contraction). Heart attack accounts for 1 out of every 5 deaths. It is a major cause of sudden death in adults. Approximately one-third of heart attacks are fatal. If the person is alive 2 hours after an attack, the probable outcome for survival is good, but may include complications such as:

- Irregular heart rhythm, called an arrhythmia; this may increase your chances for sudden death and may require electrical cardioversion or placement of a device to protect from sudden death or a pacemaker to direct the electrical system of your heart.
- Congestive heart failure
- Shock
- Infarct extension (extension of the amount of affected heart tissue) or recurrent heart attack(s)
- Pericarditis (infection around lining of the heart)
- Pulmonary embolism (blood clot in the lungs)
- Complications of treatment (For agents example, thrombolytic increases the risk of bleeding).

The good news, however, is that heart attacks are not necessarily disabling, especially when there are no complications. In fact, full recovery is possible including resumption of a normal lifestyle and usual activities, even sexual activity. Cardiac

rehabilitation and sticking with lifestyle changes can help lead to a positive recovery.

#### 109.Nail Disorders

There are a variety of types of nail disorders, and fungal infection is the most common. In 80 percent of cases of fungal infection, the toenails are affected. With proper treatment, most damaged nails can re-grow into healthy nails.

#### Signs and Symptoms

- Discoloration or spotting
- Painful, red swelling
- Pits, ridges, scars
- Lesions
- · Brown-black band

#### What Causes It?

Infections, skin diseases, benign or malignant tumors, or certain system-wide diseases cause nail disorders. They also may be self-induced.

#### Who's Most At Risk?

- Genetic predisposition
- Excessive exposure to water, heat, and humidity
- Tight-fitting shoes
- Chemical damage
- Diabetes
- Skin diseases
- Tumors
- Over-manicuring
- Habits involving picking at the skin surrounding a nail
- Soil contamination
- Human immunodeficiency virus (HIV), the virus that causes AIDS

# What to be done

A combination of a physical exam, lab tests such as fungal or bacterial cultures, and imaging procedures in the case of a suspected tumor are used for making a diagnosis.

# Treatment Options Prevention

- Keep your toenails cut short.
- Make sure your shoes fit properly.

- Avoid walking barefoot at public showers and swimming facilities.
- Throw out old, worn footwear.

#### Treatment Plan

The infected nail may be removed, and medication you take by mouth as well as medication you apply to the nail is usually prescribed.

#### **Drug Therapies**

- Terbinafine
- Itraconazole
- Fluconazole
- Steroids
- Antibiotics

#### Surgical and Other Procedures

Lesions may be removed or drained, blood clots may be drained, and sometimes the nail must be surgically removed.

## Complementary and Alternative Therapies Nutrition

Consume adequate protein and minerals for general nail health. Increase the amount of nuts, seeds, whole grains, legumes, fresh vegetables, sea vegetables, and cold-water fish that you eat. Avoid sugars, alcohol, caffeine, and refined foods. Potentially beneficial supplements to counteract nutrient deficiencies include the following.

- Vitamin A (10,000 IU per day)
- Zinc (15 to 30 mg per day)
- Essential fatty acids (i.e., flax, borage, or evening primrose oil) 1,000 to 1,500 mg twice a day
- Iron (ferrous glycinate 100 mg per day)
- Vitamin B<sub>12</sub> (1,000 mcg per day)
- Vitamin C (250 to 500 mg two times per day)
- Vitamin E (400 IU per day)
- Digestive enzymes and/or free-form amino acids may help with

compromised digestion o malabsorption.

#### Herbs

- With nutritional deficiencies, take 15 to 20 drops of the following tincture three times per day or drink two to three cups of tea daily: ginger (Zingiber officinalis), nettles (Urtica urens), dandelion herb (Taraxecum officinalis), horsetail (Equisetum arvense), spearmint (Mentha spicata), and hawthorn (Crataegus monogyna) in equal parts.
- With bacterial or viral infection, combine equal parts of coneflower (Echinacea purpurea) and goldenseal (Hydrastis canadensis) with one-half part of ginger. Take 20 drops tincture four times per day.
- With fungi, molds, or yeast infection, combine equal parts of coneflower, oregano (Origanum vulgare), spilanthes (Spilanthes acmella), usnea (Usnea barbata), Oregon grape root (Mahonia nervosa), and myrrh (Commiphora molmol). Take 20 drops tincture four times per day.

 Apply undiluted grapefruit seed extract or tea tree oil to affected nail. Do not allow contact with skin.

# Homeopathy

- Calendula for reddish, scaly rashes
- Graphites for cracking skin and nails with oozing fluid caused by fungal infections; symptoms improve with open air
- Sulphur for fungal disorders that itch, particularly if warmth worsens symptoms

# Acupuncture

Acupuncture may be help to enhance immune function, normalize digestion, and address disease conditions.

#### Massage

Massage can help stimulate circulation, which aids the transport of nutrients to the nail bed.

#### **Prognosis/Possible Complications**

Toenail regeneration generally takes 8 to 12 months, while fingernail regeneration takes half as long. Relapses or permanent damage sometimes occur. Complications may include cellulitis and the embarrassment caused by unsightly nail appearance.

#### Follow up

Follow-up may be needed in the case of drug side effects or interactions.

# 110.Obesity

Obesity is defined as an excess of body fat. Being overweight is different from being obese. Overweight refers to excess body weight compared to normal standards. The excess weight may come from muscle, bone, fat, and/or body water. Obesity refers specifically to having an abnormally high proportion of body fat. Healthcare practitioners use a number of methods to determine if an individual is overweight or obese. Body mass index, or BMI, is the measurement used to assess whether a person is overweight or obese. BMI is calculated using a mathematical formula that takes into account both a person's height and weight. A person is considered overweight if they have a BMI of between 25 and 29.9. A BMI of more than 30 is generally considered a sign of moderate to

severe obesity. Obesity is associated with many serious preventable diseases including heart disease, diabetes, high blood pressure, stroke, gallbladder disease, osteoarthritis, and respiratory disorders. For both men and women, the prevalence of obesity increases with age, but this problem is growing in children and adolescents.

# Signs and Symptoms

A high waist to hip ratio (indicating that fat is centered around the waist-also known as central obesity) increases the risk for developing serious, even life-threatening conditions associated with obesity. Physicians consider a very high waist circumference to be greater than 102 cm for men and greater than 88 cm for women. Conditions that

Conditions that may accompany obesity include:

- High cholesterol (including high triglyceride levels)
- Diabetes
- High blood pressure
- Sleep apnea (episodes when a person stops breathing while asleep)
- Osteoarthritis
- Gallstones
- Stress incontinence (inability to control urine; small amounts of urine are released when a person laughs, coughs, or moves abruptly)

#### Causes

While there is no single underlying cause of obesity, the bottom line is that excessive weight reflects an imbalance between energy input and energy output. Both genetic and behavioral factors play a role in the development of excessive weight. For example, an individual's total number of fat cells (which may predispose an individual to weight gain) is determined genetically, but behavioral factors, such as a high-calorie, high-fat diet and lack of physical activity, must be present in order for weight gain to occur.

Other causes of obesity include:

- Rare congenital disorders (conditions present at birth), such as Prader-Willi syndrome and Laurence-Moon-Biedl syndrome
- Hormonal disorders such as Cushing's Syndrome and polycystic ovary syndrome
- Insulinoma (tumors of the pancreas)
- Hypothyroidism (diminished production of hormones from the thyroid gland)
- Brain injury (or lesion) from trauma or surgery
- Certain prescription medicines, including steroids, tricyclic antidepressants, anti-epilepsy drugs, or drugs used for high blood pressure

# Risk Factors

The following factors may increase an individual's risk for becoming obese:

- Being older than 18 years of age in an industrialized country.
- Having family members who are overweight or obese
- Lack of physical activity
- Overeating

- Consuming a high-fat diet
- Taking certain prescription medications that may increase the risk for obesity
- Having a hormone disorder, such as Cushing's syndrome or hypothyroidism (underactive thyroid)
- Being emotionally stressed (from the death of a loved one, for example), which may cause a person to overeat
- Being born with rare disorders associated with obesity.

#### **Preventive Care**

The best way to prevent obesity and maintain a normal weight is to eat a healthy diet and exercise often. Maintaining daily records of both fat and calorie intake as well as exercise habits are an excellent way to get started in this endeavor. American Diabetes Association, the American Heart Association, and the American Dietetic Association recommend that no more than 30% of a person's total calorie intake should come from fats. Overall, diets should be comprised of a wide variety of foods in order to provide a balanced intake of essential nutrients. In addition to overeating, a sedentary lifestyle is a key factor in weight Studies show that exercise-from moderate to rigorous-helps prevent obesity. While most proponents of exercise regimens (including those advocated by the Centers and Prevention) Control Disease at least 30 minutes recommend moderately intense aerobic activity (such as a brisk walk) at least 5 days a week, all physical activity is of value-from taking the stairs to cleaning the house or working in the garden. Strength training is also important for maintaining lean body mass.

#### Diagnosis

The obesity guidelines put forth by the National Heart, Lung, and Blood Institute propose that healthcare practitioners use body mass index (BMI) to assess whether or not an individual is overweight or obese. To determine BMI, weight in kilograms is divided by height in meters, squared. The following BMI ranges are most often used as indications that a person is overweight or obese:

BMI 25 to 29.9 (overweight)

- BMI 30 to 39.9 (moderately obese)
- BMI 40 or above (extremely obese)

After assessing BMI, blood pressure and percentage of body fat may be measured, and blood tests performed to evaluate cholesterol levels and determine how well the thyroid is functioning.

**Treatment Approach** 

The primary goal in treating obesity is to reduce overall body weight and maintain the lower weight. This usually involves a combination of diet, exercise, and other lifestyle modifications, but the specific method of treatment depends on the severity of obesity. Medications may be prescribed in addition to an exercise program and a low-calorie diet. Some herbs supplements such as 5-HTP, fiber, and green tea may aid in weight loss and help alleviate the complications of obesity. Acupuncture may also have beneficial effects on weight loss, as can Ayurvedic medicines. Mind/body medicine including psychotherapy, hypnosis, and meditation, may reduce the stress that so often leads to overeating. In severe cases, gastrointestinal surgery may be considered.

#### Lifestyle

Increased physical activity and a diet that is limited in calories are the most important components of a weight loss program. Both components are also crucial to maintenance once the weight has been lost. The key to losing and keeping off weight is to set realistic weight loss goals that achievable through eating in moderation, appropriate food selection, and consistent physical activity. Increasing physical activity may help a person lose weight, primarily in the first 6 months, as well as maintain a desirable weight in the longterm. Exercise not only contributes to weight loss, it also decreases abdominal fat increases cardiorespiratory which can reduce complications associated with overweight and obesity such as high blood pressure, diabetes, and heart disease. It is important for people who are not used to exercising to begin with a gentle regimen that increases in intensity over time. The long-term goal is to participate in a moderately intense exercise routine for at least 30 minutes, 5 to 7 days a week. program should Ideally. exercise an combine aerobic activity such as walking,

running, or swimming with a program of strength training, such as lifting lightweights.

## Medications

Weight loss medications should be used in addition to diet, exercise, and other lifestyle modifications. Many are available by prescription only and some have serious side effects. For these reasons, weight loss medications should only be used under the direction and supervision of a physician.

## **Prescription Medications**

- Sibutramine-boosts metabolism, enhances energy level, and promotes a feeling of fullness; studies have found it to be effective for weight loss, but side effects include dry mouth and insomnia; cannot be taken by people with a history of stroke, seizures, or heart, liver, or kidney diseases
- Orlistat-reduces the absorption of fat from foods, causing weight loss and lowered cholesterol; also reduces absorption of essential fatsoluble vitamins A, D, E, and K; should not be used by people with a history of kidney stones
- Phentermine-suppresses serious potential side effects include pulmonary hypertension and heart valve defects (these conditions are much more likely to occur when used in combination fenfluramine, also known as fenphen; medications fortunately, containing fenfluramine have been market); removed from the phentermine should not be used MAOI with SSRI and antidepressant medications
- derivatives Amphetamine (benzphetamine, diethylpropion, mazindol)phendimetrazine, and elevate mood and reduce weight moderately over the short term (3 to 12 weeks); can cause addiction, insomnia, agitation, and consequently of these the use medications is not recommended

Surgery and Other Procedures

Surgery may be necessary for individuals who are extremely obese (those who have a BMI of 40 or higher). Some options include:

- Roux-en Y procedure-reduces the size of the stomach, creating a feeling of fullness (satiety); vomiting is the most common side effect
- Gastric banding-passes an adjustable silicone band around the stomach, which creates feeling of satiety; gastric bands can be removed if necessary
- Liposuction-removes fat deposits from specific body areas; weight gain is more likely in other areas of the body after the procedure

# **Nutrition and Dietary Supplements** Diet

Diet plans are enormously popular today. They range from traditional low-fat, highcarbohydrate diets to the more controversial high-protein, high-fat, low-carbohydrate diets. The truth is, no specific diet works for everyone, and no diet works without the other essential components of weight lossexercise and stress management. In general, studies have shown that diets limiting fat intake are safe and effective for weight loss. Studies have consistently shown, however, that low-fat diets combined with low-calorie intakes are the safest, most effective method of weight loss for overweight or obese individuals, and the best way for them to keep the pounds off for good. Some experts suggest that increased levels of physical activity are necessary for weight loss when eating a diet high in protein.

# Supplements

# 5-Hydroxytryptophan (5-HTP)

5-HTP, a supplement made from the seeds of the African plant Griffonia simplicifolia, may help reduce binge eating associated with obesity and dieting. 5-HTP is thought to reduce hunger cravings by boosting serotonin levels in the central nervous system. (Serotonin levels drop during dieting, often causing carbohydrate cravings and possible binge eating.) People who are taking antidepressant medications (SSRIs or MAOIs) must avoid 5-HTP.

# Calcium

Dietary calcium intake (from low-fat dairy products) may be associated with a decrease in body weight. For example, in a study of overweight women, daily intake of 1000 mg of calcium was associated with a loss of 8

kilograms (17.6 pounds) in weight, and 5 kilogram (11 pound) in body fat. Unfortunately, these effects cannot be specifically attributed to calcium since dairy sources of calcium contain other nutrients that may have been involved in the weight loss.

#### Fiber

Preliminary evidence suggests that dietary fiber may help lower insulin levels. In addition, one study of nearly 3,000 young adults suggests that high levels of insulin in the bloodstream (associated with low-fiber diets) may contribute to excessive weight gain for several reasons, including increased appetite.

#### Vitamin C

Studies suggest that obese individuals may have lower vitamin C levels than nonobese individuals. Researchers speculate that insufficient amounts of vitamin C may contribute to weight gain by decreasing metabolic rates and energy expenditures.

#### Fish Oil

Studies suggest that eating fish rich in omega-3 fatty acids (such as salmon, mackerel, and herring) seems to improve glucose-insulin metabolism and cholesterol levels in obese people both with and without high blood pressure. These effects were most pronounced when daily servings of fatty fish were incorporated into a weightloss program that included physical activity and a low-fat diet. These studies also suggest that people who follow a weight loss program achieve better control over their blood sugar and cholesterol levels when fish is a staple in the diet. Fatty, coldwater fish should be consumed at least two to three times per week to obtain adequate amounts of omega-3 fatty acids.

# Conjugated Linoleic acid (CLA)

CLA can help control weight in obese individuals by reducing body fat and enhancing lean body mass. Until such time, use of this supplement is not recommended.

Studies have revealed that zinc may increase lean body mass and decrease or keep fat mass stable. The reason for this may be that zinc increases levels of leptin, a molecule that stimulates energy expenditure and decreases appetite.

#### Chitosan

Derived from the shells of crustaceans, chitosan is promoted as a remedy for obesity. While some studies have found that chitosan (in addition to a low-calorie diet) significantly reduces weight in obese people, it is unclear whether the supplement itself, the low-calorie diet, or a combination of both led to the weight loss.

#### Dehydroepiandrosterone (DHEA)

DHEA has only recently begun to be studied in humans as a treatment for obesity, and the results have been conflicting. While animal studies have found DHEA to be effective in reducing body weight, studies of nonobese men and women showed that DHEA produced no change in total body weight, but measures of total body fat and LDL ("bad") cholesterol did improve. These differences may be due to the fact that higher dosages were used in the animal studies than in the human studies. Further studies (particularly with obese individuals) are needed to determine whether DHEA effectively reduces body weight in obese people. Until the safety and effectiveness of DHEA is fully tested, it is best not to use this supplement for weight loss.

#### Chromium

Chromium may regulate lean body mass and reduce body fat, its effects are small compared to those of exercise and a well-balanced diet. Chromium does appear to improve blood sugar, particularly in those with diabetes and glucose intolerance.

#### Vitamin D

Studies suggest that obese people tend to have lower levels of vitamin D than people who are not obese, and that supplementation may correct that deficiency.

# Other Supplements

#### Pyruvate

Pyruvate has been promoted as a weight loss and cholesterol-lowering supplement, but there is no substantive body of research to support these claims.

#### L-Carnitine

Although L-carnitine has been marketed as a weight loss supplement, a recent study of moderately overweight women found that L-carnitine did not significantly alter body weight, body fat, or lean body mass. Based on the results of this one small study, claims that L-carnitine helps to reduce weight appear to be unfounded.

#### Herbs

# Ephedra (Ephedra sinensis)

Supplements containing ephedra, also known as ma huang, have been widely touted as energy boosters and weight loss stimulants. In fact, studies have shown that ephedrine (derived from ephedra), when used in combination with caffeine, may be helpful in treating obesity. However, serious adverse effects ranging from extremely high blood pressure to fatal heart attacks, stroke, and seizures have been reported, causing the Food and Drug Administration (FDA) to propose limits on the dose and duration of its usage. Many healthcare practitioners recommend that ephedra not be used to treat obesity or for any other reason because of these dangerous side effects.

#### Psyllium (Plantaginis ovatae)

Studies and clinical reports suggest that psyllium, a soluble fiber, may increase the sensation of fullness (satiety) and reduce hunger cravings. For these reasons, incorporating psyllium and other sources of fiber into the diet may aid weight loss.

#### Green tea (Camellia sinensis)

Studies suggest that green tea extract may boost metabolism and help burn fat, but there have been no specific studies of this herb in obese individuals. Some researchers speculate that substances in green tea known, as polyphenols are responsible for the herb's fat-burning effect.

### Hydroxycitric acid

Obtained from plants native to India (including Garcinia cambogia and Garcinia indica), hydroxycitric acid has been incorporated into many commercial weightloss supplements. Although animal studies have found that hydroxycitric acid reduced food intake and prevented weight gain, studies of G. cambogia in humans have produced less promising results.

# Black beans (Phaseolus vulgaris)

It is an amlase inhibitor that inhibits digestion of starch and absorption of glucose. It can be effectively used in all obese patients to reduce and control excess fat and thus lowering the risk of heart, liver, gall bladder diseases, diabetes, arthritis, breathing disorder, problem with conception etc and other problems associated with obesity. It has antioxidant and antihyperlipidemic properties in addition to its antidiabetic action.

Oolong tea (Thea sinensis)

In traditional cultures, oolong tea has been used to prevent obesity and lower cholesterol. One animal study found that oolong tea prevented weight gain in rats fed a high-fat diet. This study suggests that the traditional use of oolong tea may have validity. Further research in animals and people would be helpful.

Capsaicin (Capsicum frutescens)

Preliminary evidence indicates that capsaicin (the substance that makes chili peppers taste hot) may help the body burn fat, particularly when eating a high-fat diet. Further research is needed to confirm these early findings, however.

Homeopathy

There have been few studies examining the effectiveness of specific homeopathic remedies. Despite encouraging advertisements, there is no single or combination homeopathic remedy that will help all people lose weight.

Acupuncture

Acupuncture is believed to promote weight loss by stimulating points on the body that boost serotonin levels. (Elevated serotonin levels are thought to suppress appetite.) The effects of acupuncture on weight loss have been found that people who received electrical acupuncture of the ear (auricular acupuncture) experienced a reduction in appetite.

Mind/Body Medicine Cognitive Behavioral Therapy

These practices include setting reasonable or monthly goals-how exercise or how much weight loss is desired, for instance-and establishing rewards for successes in ways other than with food. Working with both a dietician and a behavioral specialist can help an obese individual put these practices into play and achieve his ultimate goals. or her Monitoring progress with a daily record of food and calorie intake, servings of fruits and vegetables, the amount of water consumed, total fat intake, and exercise sessions will also aid in weight loss. It also helps to eliminate or reduce the stress that leads to overeating by practicing relaxation exercises, such as yoga, meditation, or tai chi. Avoiding restaurants that serve heavy, fat-laden food and "cues" that trigger the desire to eat, will also help prevent weight

gain. Finally, it is hard to lose weight without support. To remain focused on goals and to receive encouragement when needed, it is important to seek the advice of experienced professionals with a proven track record of successfully helping others lose weight. Joining a support group may also be of value.

#### Hypnosis

Although studies on hypnosis as a treatment for obesity are not conclusive, most research suggests that hypnotherapy (when used in combination with cognitive behavioral therapy, exercise, and a low-fat diet) may help overweight or obese individuals lose weight.

#### Ayurveda/Siddha

Guggal (Commiphora mukal) is a common ingredient found in several Ayurvedic medicines used to treat obesity. Studies have shown that overweight individuals who receive these guggul-containing Ayurvedic remedies lose a significant amount of weight compared to those who do not receive such medicines. These Ayurvedic remedies also caused substantial decreases in cholesterol. Minor side effects associated with containing-containing preparations include mild diarrhea and nausea.

#### Other Considerations Pregnancy

Pregnant women should not take any herbal remedies or over-the-counter or prescription medications for weight loss. Obese women who become pregnant are at an increased risk for the following:

- Gestational diabetes-a diabetic condition that appears during pregnancy and usually goes away after the birth of the baby
- High blood pressure
- Preeclampsia-a potentially fatal condition causing high blood pressure, fluid retention, and protein in the urine; may cause abdominal pain and vomiting
- Abnormally large infants resulting in difficult deliveries
- Caesarean sections as well as complications associated with Caesarean sections
- Fetal distress-a condition in which the baby does not receive enough oxygen

# **Prognosis and Complications**

People who are overweight or obese increase their risk for developing the following conditions:

- Type 2 diabetes
- · High blood pressure
- · Coronary artery disease
- · High cholesterol
- High levels of triglycerides in the blood
- Heart failure

- Respiratory problems (such as sleep apnea)
- Circulatory problems (such as varicose veins)
- Gallbladder disease
- Breast cancer (after menopause) and endometrial cancer
- Prostate cancer
- Colorectal cancer
- Arthritis
- Skin problems (such as warts)

# 111.Osteoarthritis; Arthritis, Osteo (OA)

Osteoarthritis (OA) is the most common form of arthritis, especially among older people. It is a joint disease caused by the breakdown of cartilage-the firm, rubbery tissue that cushions bones at joints. Healthy cartilage allows bones to glide over one another and cartilage absorbs energy from the shock of physical movement. In OA cartilage breaks down and wears away. As a result, the bones rub together, causing pain, swelling, and stiffness. OA may also limit the range of motion in affected joints. Most often, OA develops in the hands, knees, hips, and spine. The disease affects men and women nearly equally. Symptoms tend to appear when individuals are in there 50s and 60s.

# Signs and Symptoms

- Joint pain (often a deep, aching pain) that is worsened by movement and improved with rest (in more severe cases, a person may experience constant pain)
  - Stiffness in the morning or after being inactive for more than 15 minutes
  - Joint swelling
  - Joints that are warm to the touch
  - Crunching or crackling noise when the joint moves (crepitating)
  - Limited range of motion
  - Muscle weakness
  - Abnormal growth of bony knobs near joints causing deformities (such as Heberden's nodes, in which bumps appear on the outermost finger joints)

#### Causes

OA is also often called degenerative joint disease because this condition involves the destruction of cartilage, which normally protects the joint. Once the cartilage becomes somewhat damaged, however, it is more likely for further injury to ensue from repetitive use or another injury. Less commonly, OA is due to a fracture, mechanical abnormalities, other bone and joint disease (such as gout), or an underlying metabolic or hormonal disorder.

#### Risk Factors

- Increasing age
- Genetic predisposition
- Obesity
- Injury to the joint
- History of inflammatory join disease
- Metabolic or hormonal disorders (such as hemochromatosis and acromegaly)
- Bone and joint disorders present at birth
- Repetitive stressful joint use (such as with certain occupations like baseball, ballet dancing and construction work)
- Deposits of crystals in joints, such as happens with gout

# Diagnosis

Because no single test can diagnose OA, most orthopaedician use a combination of the following methods to diagnose the disease and rule out the possibility of other causes of arthritis:

 Medical history-the doctor assesses symptoms by asking when they started and how they changed over time, including which joints are currently involved and have been affected previously. He or she will also ask about other medical conditions that may be contributing to current joint symptoms, and whether any factors (such as a fall or injury) could have caused these symptoms. The doctor will also determine whether you are taking might interact with drugs that he or she is considering prescribing.

- Physical exam-each of the affected joints is examined for redness and swelling, crepitations (a crackling noise that may be heard and sensation felt when bone is rubbing on bone due to lack of cartilage), the presence of fluid in the joint, and the strength and range of motion of the joint.
- X-rays-can detect cartilage loss (which is indicated by narrowing of the joint space on x-ray) and bone damage such as bone spurs or erosions.
- Blood tests-are performed to look for general signs of inflammation, to help eliminate the possibility of other types of arthritis such as rheumatoid or Lyme's disease, and to check for possible markers of OA such as hyaluronic acid, a substance that normally provides lubrication for joints but breaks down in the case of OA.
- Joint aspiration if fluid is present, it can be withdrawn from the joint for evaluation using a needle and syringe; normally with OA, there is not an adequate amount of fluid in the joint space to aspirate; therefore, evaluation of fluid may reveal another cause of arthritis such as gout or an infection.

# Preventive Care

The following measures may reduce the risk of developing OA:

- Protecting an injured joint from further damage
- Exercising
- Losing weight
- Avoiding excessive repetitive motions

### **Treatment Approach**

The goals of OA treatment are to relieve symptoms, maintain mobility, and minimize disability. Painkillers and anti-inflammatory medications should not be used as the primary treatment for OA-they should be used only in addition to other forms of treatment. Lifestyle approaches, including exercise, and many alternative medical therapies are becoming more popular and are considered safe and effective for the treatment OA. Some of the most promising complementary approaches for treating OA include the following:

- Reducing physical stress on the joint (such as by losing weight or improving posture)
- Lifestyle changes (particularly exercise)
- Supplements including Sadenosylmethionine (SAMe), glucosamine and/or chondroitin, and antioxidants
- Herbs with anti-inflammatory properties, including devil's claw, willow bark, and capsaicin (cream)
- Acupuncture
- Chiropractic
  - Physical therapy and magnet therapy
  - Yoga
  - Tai chi

#### Lifestyle

Foods that may contribute to chronic inflammation are foods with a high glycemic index, such as fruit juices or rice cakes, foods heavy in polyunsaturated or saturated fats, and foods high in arachidonic acid. Some specific foods to avoid are

- Fatty cuts of red meat (high in saturated fats)
- Organ meats: liver, kidney, and so forth (high in arachidonic acid)
- Egg yolks (high in arachidonic acid)
- Pasta (high glycemic index)
- Juices (high glycemic index)
- Rice, especially rice cakes (high glycemic index)
- White bread (substitute whole grain breads such as rye or whole wheat)
- Better choices are foods with a low glycemic index and foods that are heavy in monounsaturated fats.
   Some specific good foods are

- Salmon and other fish
- Oatmeal
- Fresh fruits and vegetables
- Olives and olive oil
- Peanuts and other nuts
- Whey proteins.

#### Exercise

Exercise to strengthen, stretch, and relax muscles around affected joints is almost always included in a treatment plan for OA. Studies also suggest that in addition to reduction of pain and disability, exercise improves strength, range of motion, balance and coordination, endurance, and posture.

#### Medications

- Acetaminophen-reduces pain; the American Geriatrics Society recommends trying this medication first to alleviate pain.
- Aspirin and other nonsteroidal antiinflammatory drugs (NSAIDs)reduce pain and swelling. These include ibuprofen, ketoprofen, and naproxen sodium, as well prescription medications, such as diclofenac, diflunisal, etodolac. fenoprofen, indomethacin. nabumetone, oxaprożin piroxicam, sulindac, salsalate, and tolmetin as well as stronger versions of the OTC drugs. Some evidence even suggests that NSAIDs accelerate the progression of OA because they appear to inhibit cartilage repair. Further studies are needed about this controversial issue.
- Cyclooxygenase 2 (COX-2) inhibitors (such as celecoxib, ectocoxib and rofecoxib)-reduce pain and are less likely to cause the gastrointestinal side effects that sometimes accompany NSAIDs
- Tramadol-for pain that does not improve with other medications
- Hyaluronic acid-may restore lubrication to the joints. The medication is injected into affected joints once per week for 3 to 5 weeks and the effects may last up to one year. After each injection, weight-bearing activity should be avoided for about 48 hours.

- Glucocorticoids-injected in or around affected joints to relieve symptoms; no more than two to three injections should be administered in one year.
- Misoprostol or omeprazole-taken together with an NSAID may reduce ulcers and gastrointestinal bleeding associated with NSAID use

# Surgery and Other Procedures

Surgery is usually only considered as a last resort for OA. Surgical options include:

- Arthroscopic debridement and lavage (using a lighted instrument to examine the interior of a joint, remove dead tissue, and wash the joint) may reduce symptoms
- Osteotomy (removal of all or part of the bone; loose fragments that may be causing symptoms are removed at the same time) may alleviate pain and inflammation in people with moderately advanced knee or hip OA.
  - Arthrodesis (fusion of joints) may be considered for the spine and small joints of the wrist, hand, and foot to reduce pain. Fusion of the bone, however, eliminates movement of that joint.
- Arthroplasty (joint replacement) is used for people with severe and advanced OA who have not improved from any other treatments. This procedure works best for older people because artificial joints typically last only 20 years.

# Nutrition and Dietary Supplements Glucosamine and Chondroitin

Glucosamine and chondroitin are compounds that occur naturally in human cartilage. Several reviews of clinical trials examining either glucosamine or chondroitin for OA concluded that these agents showed a number of benefits.

Glucosamine is administered orally or by injection into a joint or muscle. In its most commonly used form, glucosamine sulfate, it has been shown to:

Decrease pain more effectively than placebo or NSAIDs

- Take longer to begin working than ibuprofen but alleviate pain for a longer period of time
- Have significantly fewer adverse effects than ibufrofen
- Significantly improve pain and range of motion compared to both placebo and the NSAID piroxicam
- Have longer-lasting improvement of symptoms compared to piroxicam

Although encouraging, these studies did not examine the long-term safety effectiveness of this supplement. In one long-term study in which 212 patients with OA received either glucosamine sulfate or placebo for 3 years, those in glucosamine group experienced a 25% improvement in symptoms as well as diminished narrowing of the joint space, suggesting that the supplement slowed the progression of the disease. Some experts believe that another form of glucosamine known as glucosamine hydrochloride may be absorbed more readily by the body than glucosamine sulfate. Since most research to date has been conducted on glucosamine sulfate. this is the form generally recommended for OA.

Chondroitin is also administered orally or by injection into a joint or muscle. It has been found to produce the following results in several well-designed clinical trials:

- Reduce the need for NSAIDs and other pain relievers
- Alleviate pain (sometimes more effectively than conventional medications; this effect even lasts up to 3 months after chondroitin supplementation is discontinued)
- Increase mobility
- Decrease swelling
- Reduce amount of fluid in the joint
- Enhance walking pace
- Although glucosamine and chondroitin have been studied separately, accumulating evidence suggests that taking both supplements together may be a safe and effective treatment for OA.

S-adenosylmethionine (SAMe)

It may reduce pain and inflammation, but researchers are not clear how this works. Clinical trials with humans have also shown favorable results for SAMe when used to

relieve OA symptoms. In several short-term studies (ranging from 4 to 12 weeks), SAMe supplements (1200 mg/day) compared favorably to NSAIDs in adults with knee, hip, or spine osteoarthritis in the following ways:

- Diminished morning stiffness
- Decreased pain
- Reduced swelling
- Improved range of motion
- Increased walking pace

In an extensive review of studies conducted with SAMe, including trials of longer duration (namely, 2 years), the supplement was associated with the following benefits:

- Improved symptoms
- Few side effects
- No negative influences on cartilage production
  - Reduced risk for relapse

#### Vitamin D

Vitamin D is essential to bone and cartilage health. Studies evaluating vitamin D use for OA have found the following:

- Vitamin D prevents breakdown of cartilage
- Lower intake of vitamin D may be linked to greater risk of hip OA in older women and OA-related joint changes (visible on X-rays) in both men and women

#### Antioxidants

Antioxidants appear to significantly ease oxidative stress and inflammation caused by free radicals and may therefore slow the progression of OA. Free radicals can be produced in the joints and have been implicated in many degenerative changes in the aging body, including destruction of cartilage and connective tissue. Antioxidants appear to offset the damage caused by free radicals. The following antioxidants may help to reduce the symptoms of OA:

- Vitamin A and beta-carotene
  - Vitamin C
  - Vitamin E

Those who took 600 mg of vitamin E three times a day experienced significantly less pain than those who took the NSAID diclofenac.

#### **Niacinamide**

People taking niacinamide reported the following:

- Improved joint mobility
- Reduced need for anti-inflammatory medications

The study authors speculate that niacinamide may aid cartilage repair and suggest that it may be used safely with NSAIDs to reduce inflammation. Niacinamide must be used for at least 3 weeks before the benefits described are seen. Experts also suggest that long-term use (1 to 3 years) may slow the progression of the disease.

#### **Omega-3 Fatty Acids**

Omega-3 fatty acids are found in coldwater fatty fish (such as salmon, mackerel, and herring), flaxseed, rapeseed, and walnuts. Research regarding the use of omega-3 fatty acid supplements for inflammatory joint conditions has focused almost entirely on rheumatoid arthritis. Diets rich in omega-3 fatty acids (and low in omega-6 fatty acids) may benefit people with other inflammatory disorders, such as OA. In fact, several laboratory studies of cartilage-containing cells have found that omega-3 fatty acids decrease inflammation and reduce activity of enzymes that break down cartilage. Another potential source of omega-3 fatty acids is the New Zealand green lipped mussel (Perna canaliculus), used for centuries by the Maori people for good health. P. canaliculus extracts experienced the following:

- Decreased joint stiffness and pain
- Increased grip strength
- Enhanced walking pace

In addition, it is better to use lipid extracts of *P. canaliculus* rather than powder as there is less chance of an allergic reaction. *People who are allergic to seafood should avoid P. canaliculus*.

#### Manganese

Manganese is among the substances that the body needs to build cartilage. In a clinical trial studying glucosamine, choindroitin, and manganese, people with mild to moderate OA of the knee showed significant improvement in symptoms after taking these supplements in combination. No serious side effects were reported. People with more severe forms of the disease did not show improvement as a result of taking the combination, however. Although earlier studies have indicated that low levels of

manganese may contribute to degenerative joint conditions and bone loss, it is not clear from this trial what role manganese (as opposed to chondroitin and glucosamine) may have played in the results.

### **Other Supplements**

- Bromelain (Ananas comosus)compared favorably to NSAIDs for pain reduction
- Boron-population, animal, and preliminary human studies suggest that this trace element may reduce occurrence of symptoms of OA
- Collagen hydrolysate-may stimulate cells to make collagen, although this theory is currently being tested

#### Herbs

Herbal remedies are among the most popular alternative therapies used by individuals with arthritis. The following herbs are most effective for treating OA:

- Devil's claw (Harpagophytum procumbens)
- Willow bark (Salix spp.)
- A combination of aspen (Populus tremula), ash (Fraxinus excelsior), and goldenrod (Solidago viraurea)
- An Ayurvedic herbal mixture containing extracts of ashwagandha (Withania somnifera), boswellia (Boswellia serrata), and turmeric (Curcuma longa)
- A combination of willow bark (Salix spp.), black cohosh (Cimicifuga racemosa), sarsaparilla (Smilax spp.), guaiacum (Guaiacum officinale) resin, and poplar bark (Populus tremuloides)

Other herbs that have shown promise in the treatment of OA include:

# Capsaicin (Capsicum frutescens)

Capsaicin is the main component in hot chili peppers (also known as cayenne). Applied to the surface of the skin, it is believed to deplete stores of a substance that contributes to inflammation and pain in arthritis. Several studies have shown that capsaicin cream provided much better pain relief than a placebo but no improvement in joint swelling, grip strength, or function for people with OA. Pain reduction generally begins 3 to 7 days after applying the capsaicin cream to the skin.

# Avocado/Soybean extracts

Avocado/soybean extracts stimulate the growth of collagen (the principal protein of the skin, tendons, cartilage, and bone) in cartilage cells. People with OA of the knee or hip, researchers found that participants who received avocado/soybean extracts for 6 months experienced the following improvements with few or no side effects:

- Reduction in pain and disability
- Increase in mobility
- Reduced need for NSAIDs

#### Cat's claw (Uncaria tomentosa)

In a study of 45 people with OA of the knee, those who received cat's claw reported a significant reduction in knee pain compared to those who received placebo.

## Ginger (Zingiber officinale)

Ginger extract has long been used in practices (such traditional medical Ayurvedic and Chinese) to decrease inflammation. The mechanism of action is believed to be due to the inhibition of prostaglandin and leukotriene synthesis.

#### Kava kava (Piper methysticum)

Kava has traditionally been used as a pain reliever, but few scientific studies have evaluated kava for this purpose. In support of this traditional use, animal studies have also shown that kava reduces pain.

## Nettle leaf

Nettle leaf has been shown to reduce TNFalpha levels and IL-1b. Nettle leaf also inhibits the genetic transcription factor that activates TNF-alpha in synovial tissue.

# Acupuncture

A few studies have shown that people with OA experience better pain relief and improvement in function from acupuncture than from NSAIDs such as piroxicam.

# Chiropractic

Although there is no evidence that chiropractic care can reverse the joint degeneration that causes OA, some studies indicate that spinal manipulation may:

- Increase range of motion
- Restore normal movement of the spine
- Relax the muscles
- Improve joint coordination
- Reduce pain

In fact, a comprehensive review of the scientific literature suggests

chiropractic, especially when combined glucosamine supplements rehabilitative stretches and exercise, is an effective supplemental treatment for OA. Chiropractors will avoid using direct thrusts or pressure on red, swollen joints.

## Massage and Physical Therapy Physical Therapy

Manual therapy and supervised exercise may decrease or delay the need for surgery in individuals with OA. In a trial evaluating physical therapy and exercise in people with OA of the knee, participants who received manual therapy to the lumbar spine, hip. ankle, and knees showed the following improvements:

- Less stiffness
- Reduced pain
- Improved functional ability
- Improved walking distance
- Less need for knee surgery one year later

### Magnet Therapy

Exposure to electromagnetic fields has been shown to boost the number of cartilagebuilding cells and substances in laboratory experiments. One important study found that low-energy AC and DC magnetic fields stimulated the production of cartilage. For therapeutic purposes, magnets can applied one of two ways: directly to the skin surface over the bone or joint (Capacitive coupling) or via pulsed electromagnetic fields (PEMFs) which induce an electrical current in the target tissue without making direct contact to the body (Inductive coupling). Studies using either type of magnet therapy for arthritis are limited, and the few that exist have mainly used poor methods. People with OA of the knee, magnet therapy (applied to the knee for 6 to 10 hours per day over a period of one month) significantly reduced pain compared with placebo.

# Balneotherapy (Hydrotherapy or spa

Balneotherapy is one of the oldest forms of therapy for pain relief for people with arthritis. The term "balneo" comes from the Latin word for bath (balneum) and refers to bathing in thermal or mineral waters. Sulfur-containing mud baths, for example, have been shown to relieve symptoms of arthritis. However, hydrotherapy, which can be performed under the guidance of certain physical therapists, is occasionally used interchangeably with the balneotherapy. The goals of balneotherapy for arthritis include:

- Improving range of joint motion
- Increasing muscle strength
- Eliminating muscle spasm
- Enhancing functional mobility
- Easing pain

Although balneotherapy is most often used for psoriatic or rheumatoid arthritis, some medical experts believe that it may be beneficial for OA as well.

#### Ice Massage, Transcutaneous Nerve Stimulation (TENS), and Electroacupuncture

In a well-designed trial comparing the effectiveness of TENS, electroacupuncture, and ice massage for the treatment of knee OA, each of these methods were found to:

- Reduce pain at rest
- Reduce stiffness
- Boost walking speed
  - · Increase quadriceps muscle strength
  - · Increase knee range of motion

TENS is a technique used by many physical therapists. When the nerve stimulation of TENS is applied to acupuncture points, it is called electroacupuncture.

#### **Mechanical Aids**

A variety of mechanical devices, called orthoses, are available for people with OA to help support and protect joints. Made from lightweight metal leather, elastic, foam, and plastic, orthoses allow some movement within the affected joint and do not restrict nearby joints. For example, splints or braces help align joints and properly distribute weight. Shock-absorbing soles in shoes can help in daily activities and during exercise. These mechanical aids are used most frequently to treat arthritic hands, wrists, knees, ankles, and feet. Orthoses should be custom-fitted by a physical or occupational therapist.

#### Homeopathy

- topical homeopathic gel comfrey (Symphytum containing officinale), poison ivy (Rhus toxicodendron), and marsh-tea (Ledum palustre)
- combination homeopathic preparation containing

toxicodendron. Arnica Montana (arnica), Solanum dulcamara (climbing nightshade), Sanguinarra Canadensis (bloodroot), and Sulphur

 A liquid homeopathic preparation containing R. toxicodendron, Causticum (potassium hydrate), and Lac vaccinum (cow's milk).

Other common homeopathic remedies for OA include:

- Calcarea carbonica (carbonate of lime or calcium carbonate)
- Bryonia (wild hops)
- Graphites
- Guaiacum

#### Mind/Body Medicine

A holistic approach to care in these clinical circumstances may positively affect both lifestyle and how one feels overall. Many people report that relaxation techniques. such as guided imagery and meditation, are an important part of comprehensive, holistic care, and help to alleviate pain and other symptoms of OA.

# Ayurveda/Siddha

This ancient Indian practice is well known for its physical, psychological, emotional, and spiritual benefits and is recommended in the West to relieve musculoskeletal symptoms. In one clinical trial studying OA of the hand, the group practicing yoga showed significant decrease in pain and improved range of motion compared to those participating in non-yoga stretching and strengthening sessions. Certain yoga "asanas" (postures) strengthen the quadriceps and emphasize stretching, both of which benefit people with OA of the knee. People with arthritis should begin asanas slowly and they should be performed only after a warm up. Yoga is best performed under the careful guidance of a reputable instructor.

Herbal Remedies An Ayurvedic combination containing the following herbs significantly reduced pain and disability in people with OA:

- Winter cherry (Withania somnifera)
- Boswellia (Boswellia serrata)
- Turmeric (Curcuma longa) Side effects of these herbs include nausea, dermatitis, and stomach pain.

5-Loxin

Boswellic acid (5-Loxin) is the active component of the Boswellia serrata tree native to India. Practitioners of the Avurvedic system of medicine to treat arthritis for centuries have used the aromatic gum resins from this tree. Scientists have isolated the active component of Boswellia serrata and it is the only known natural preparation that inhibits the 5-LOX pathway of the inflammatory cascade.

Curcumin

Curcumin comes from a plant similar to ginger and is an anti-inflammatory that inhibits both COX-2 and LOX enzyme activity. In addition, curcumin interferes with NF-KB to stop autoimmune activation and lessen tissue destruction

## **Traditional Chinese Medicine** Tai Chi

This ancient form of classical conditioning practiced in China for centuries has been shown to produce a number of benefits, including the following:

- Improved fitness
- Increased muscular strength
- Enhanced flexibility
- · Reduced percentage of body fat
- Diminished risk of falls in the elderly

In a trial of subjects with OA of the knee or hip (ranging in age from 49 to 81), those who practiced tai chi twice a week for 3 months showed significant improvement compared to those in the control group in the following areas:

- Overall sense of quality of life
- Diminished feelings of stress/tension
- Increased satisfaction with general health
- Decreased fatigue
- Easier self-management of arthritis symptoms. Service Absoluteration of a supply and

Natural therapies have been shown to work by the following mechanisms:

- Inhibiting COX-2
- Inhibition of the 5-LOX pathway •
  - Suppressing TNF-alpha, IL -1b, and IL-6
  - Reducing production of LTB4
  - Preventing the over-expression of
- Inhibiting the formation of PE2
  - Promoting the synthesis of proteoglycans and glycosaminoglycans in the joints
- Suppressing cartilage-destroying enzymes, collagenase and phospholipase
  - Attracting water to the cartilage to enhance synovial lubrication

### Other Considerations

#### Pregnancy

Most women who become pregnant are too young to have OA. Many of the herbs used in treatment for OA have not been tested on pregnant women and some are known to be unsafe for women who are pregnant. For this reason, pregnant women should only take substances for pain and other symptoms that are approved by their obstetrician.

# Prognosis and Complications

Complications of OA include:

- Inability to walk due to very advanced hip or knee OA
  - Gastrointestinal bleeding decreased kidney function resulting from long-term NSAID and aspirin use

fluid in joints and joint Increased enlargement occur later in the course of the disease. In the most advanced stages, OA can cause full cartilage loss. In some cases joint replacement may become necessary. While OA can be a debilitating condition, shown current treatments have promise in reducing pain and improving mobility.

# 112.Osteomyelitis; Bone Infection

Osteomyelitis is a bone infection, which can occur in practically any bone in the body. Bacteria usually cause the infection, but fungi can occasionally have the same effect. The disease takes several forms, depending on the way the infection traveled to the bone and the type of bone infected. Infections can reach the bone via open fractures or surgery on fractures, from body tissues next to the bone, from artificial joints, and from ulcers in the foot. People who inject street drugs and patients who receive kidney dialysis are particularly vulnerable to osteomyelitis.

#### Signs and Symptoms

- Intense pain and a sensation of heat at the site of the affected bone
- Small areas of tenderness and swelling
- Persistent back pain that is not relieved by rest, heat, or pain killers
- Abscesses containing pus in tissue surrounding the painful bone
- Fever, in some cases
- Fatigue

#### What Causes It?

Several different types of bacteria or fungi can infect bones, often after a fracture or other injury, or as the result of a joint replacement. The infection can also spread beyond the bone, creating abscesses in muscles and other tissues outside the bone.

#### What to be done

Take blood samples to check for osteomyelitis and the type of bacterium or fungus responsible. Want to have a bone scan, which uses a mildly radioactive compound to highlight infected areas in the bones. Need a computed tomography scan or magnetic resonance imaging, two types of imaging tests that produce more detailed information than conventional X rays.

# **Treatment Options**

In addition to medications, may recommend bed rest, particularly if the infection affects back, and he or she may put you in a cast or splint to immobilize the affected bones and joints.

## **Drug Therapies**

Taking medication should clear up an infection that is found early. The type of medication need depends on the type of bacteria or fungi that caused osteomyelitis. Courses of antibiotics lasting several weeks should clear up infections identified early. Antimicrobials are recommended for chronic osteomyelitis and forms of the condition caused by fractures or infections in sites adjacent to the bone. In children, intravenous medications may be given initially when the cause of the infection is not clear. The patient may then be switched

to oral medications. In cases of osteomyelitis that result from foot ulcers or diabetes, medical treatment should include antimicrobial agents.

### **Surgical Procedures**

Surgery may be necessary when osteomyelitis is identified late or in cases of chronic osteomyelitis, osteomyelitis caused by fractures and infections in soft tissue contiguous to the bone, and that originating in foot ulcers. Antimicrobial or antibiotic therapy should follow all cases of surgery. Infected prostheses should be surgically removed, following several weeks of antibiotic treatment, to permit new prostheses to be implanted at the same time.

## Complementary and Alternative Therapies Nutrition

For overall immune support and help with healing, use the following.

- Vitamin C (250 to 500 mg two times a day)
- Zinc (30 to 50 mg per day, then reduce to 25 mg per day)
- Vitamin E (400 to 800 IU per day)
- Vitamin A (10,000 to 15,000 IU per day). Do not use if you are, or may become, pregnant.
- Acidophilus (1 to 3 capsules per day, or 1 to 5 million organisms per day)—to prevent antibiotic-induced diarrhea and yeast infections

#### Herbs

- For immune support: coneflower (Echinacea purpurea), lomatium (Lomatium dissectum), astragalus (Astragalus membranaceus)
- To fight infection: goldenseal (Hydrastis canadensis), barberry (Berberis vulgaris), garlic (Allium sativum)
- To relieve pain: valerian (Valeriana officinalis), St. John's wort (Hypericum perforatum)

For improved circulation: Ginkgo biloba, 120 mg twice a day

Herbs called alternatives are traditionally known as blood cleansers. Use an infusion of red clover (Trifolium pratense), burdock root (Arctium lappa), yellowdock (Rumex crispus), yarrow (Achillea millefolium), cleavers (Galium aparine), and licorice root (Glycyrrhiza glabra). Drink two to three

cups a day. Do not use licorice if you have hypertension. To help with the healing of abscesses, make a paste from the powders of goldenseal root (Hydrastis canadensis) and slippery elm (Ulmus fulva). Apply as needed. Homeopathy

- Arnica Montana -- used after trauma or injury, especially when accompanied by a bruised, "beat up" feeling
- Ledum -- for puncture wounds that lead to an accumulation of pus, especially if they feel better with cold applications

Silicea -- for enlarged, pus-filled glands, especially in individuals who are run-down or exhausted

#### Acupuncture

May help stimulate immune response, reducing inflammation, pain, swelling, and

#### Massage

Massage should be avoided because it could spread the infection.

#### Follow up

Physician to monitor carefully treatment.

### 113.Osteoporosis; Bone Loss

Osteoporosis, which literally means "porous bone," is a disease of the skeleton in which the bones gradually lose density and deteriorate. People begin to osteoporosis have brittle bones and an increased susceptibility to fractures of the hip, spine, and wrist. Osteoporosis is common among the elderly, but the disease can strike at any age. Although eighty percent of those affected by osteoporosis are women, particularly menopausal and postmenopausal women, men are affected as well.

#### Signs and Symptoms

Signs of a collapsed vertebra include:

- Back pain
- Loss of height
- deformity Kyphosis—a spine characterized by a hump back

### Causes

Bone consists of a strong, flexible mesh of collagen fibers and calcium phosphate. Throughout a person's lifetime, new bone is added to the skeleton and old bone is removed. During the early years of life, new bone is added faster than old bone is removed. As a result, bones become larger, stronger, and more dense until they reach peak bone mass (maximum bone density and strength). Peak bone mass tends to occur between the ages of 30 and 35. After this age, however, the bones lose increasing amounts of protein and minerals and the bones become thin and porous. The same is true for During menopausal women. menopause, estrogen levels drop.

female hormone helps protect against bone loss. Without the protective effects of estrogen, menopausal women are at an increased risk for developing osteoporosis. Other than age and menopause, causes of osteoporosis can include:

- of Long certain term use medications, particularly steroids and thyroid medications
- Cushing's syndrome .
- Kidney failure
- Diseases of the thyroid or adrenal glands
- Deficiencies in calcium, vitamin D, vitamin A, vitamin K, and/or magnesium
- Anorexia nervosa .
- Hypogonadism
- Elevated levels of prolactin (a hormone responsible for lactation)
- Alcoholism
- Rheumatoid arthritis
- Epilepsy
- Kidney failure
- Rare genetic disorders such osteogenesis imperfecta, Ehlers-Danlos syndrome, and Marfan's syndrome
- Depression

#### **Risk Factors**

- Advanced age (50 years or older)
- Being of European ancestry
- Being female
- Living a sedentary lifestyle

- Being thin
- Anorexia nervosa
- Family history of osteoporosis
- Never having menstruated or given birth to a child
- Late onset of menstruation or early menopause
- Heavy caffeine use, smoking cigarettes and/or drinking alcohol regularly
- Low exposure to sunlight
- Diets low in calcium or high in sodium
- Diabetes
- Depression
- High exposure to heavy metals (such as cadmium, copper, and lead)
- Long-term use of certain medications including corticosteroids, antibiotics, drugs that suppress the immune system, and thyroid medications

#### **Preventive Care**

Osteoporosis is a highly preventable disease. Osteoporosis develops when the amount of bone loss exceeds the amount of bone formation in the body. Although osteoporosis tends to occur in menopausal women and the elderly, the condition is most likely to develop in people who did not reach their optimal bone mass during their critical bone-building years. Therefore, measures to prevent osteoporosis should begin during childhood and should last throughout adulthood into old age. Ensuring adequate intake of calcium, magnesium and vitamin D is vital. Weight-bearing exercise, such as walking and lifting weights, as well as other exercises, including tai chi, can also help stave off the disease. Research has shown that exercise early in life boosts bone mass, while exercise later in life helps to maintain bone mass. Exercise also increases strength, coordination and balanceimportant tools to help prevent falls that cause fractures, especially in the elderly. Other ways to help prevent falls include eliminating obstacles in the home such as throw rugs, loose cords, and low pieces of furniture, keeping rooms well-lit, using hip pads, and getting regular eye exams.

#### Diagnosis

A person is at risk for osteoporosis, recommends a bone mineral density test (BMD) to determine whether an individual's bone mass is below, at, or above normal levels. BMDs are painless, noninvasive, and safe. They typically measure bone density in the spine, wrist, and/or hip, while others measure bone in the heel or hand. Having that information will help the healthcare practitioner determine a treatment approach. Prior to BMD tests, osteoporosis was only diagnosed after an individual suffered a bone fracture. Today, however, BMD tests allow physicians to identify people at risk for osteoporosis before a fracture occurs.

#### **Treatment Approach**

For those who are at risk for osteoporosis or already have the disease, current treatments are designed to boost bone mass and prevent bone loss. For example, medications such as estrogen are commonly used to slow bone loss. Making lifestyle choices, such as consuming a diet rich in fruits and vegetables and participating in a weight-bearing exercise program can also enhance bone strength. Supplements such as calcium, vitamin D, isoflavones (ingredients found in soy products) and vitamin K, can help prevent osteoporosis and even slow the progression of the disease.

#### Lifestyle

#### Diet

Studies suggest that diets rich in the following foods and nutrients may help prevent bone loss in both men and women:

- Calcium
- Magnesium
- Potassium
- Fruits
- Vegetables

A large-scale study of older White women (a population at particular risk for osteoporosis) found that those who consumed diets higher in animal protein than vegetable protein experienced more bone loss and hip fractures than those who consumed greater amounts of vegetable protein. These results suggest that adding more vegetable protein and reducing the amount of animal protein may diminish bone loss and reduce the risk of hip fractures.

Exercise

The main goal of exercise is to delay the onset of osteoporosis. This is best accomplished by regular exercise throughout life. Research has shown that exercise boosts bone mass early in life and prevents bone loss later in life. This continues to be true even during and following menopause. Exercise also improves balance, flexibility, strength, and coordination-thereby, reducing falls and fractures associated with osteoporosis. A combination of weight-bearing endurance activity (such as walking), strength-training (such as weight-lifting or yoga), flexibility and coordination exercises (such as tai chi) has been shown to prevent bone loss and boost muscle mass and bone density in people with osteoporosis.

#### Medications

Currently, estrogens, alendronate, risedronate, and raloxifene are approved for the prevention and treatment of postmenopausal osteoporosis. Calcitonin is approved for treatment only. These medications, also known as anti-resorptive medications slow or stop bone loss.

- Estrogen—boosts bone density and reduces the risk of fracture decreasing the amount of bone lost, enhancing the body's ability to absorb calcium, and diminishing the amount of calcium excreted in the urine. When taken alone, estrogen can increase a woman's risk for developing cancer in her uterine lining (endometrial cancer); so many practitioners healthcare prescribe the hormone progestin in combination with estrogen to reduce Some studies this risk. suggested that estrogen therapy also increases a woman's risk for breast cancer, abnormal blood clotting, and gallbladder disease. For this reason, many practitioners advise using very low doses of estrogen.
- Alendronate and risedronate—both of these medications belong to a class of drugs known as bisphosphonates. These drugs have been shown to boost bone density, slow or stop bone loss, and reduce the risk of fractures. Side effects are uncommon but may include

abdominal pain, heartburn, nausea, and irritation of the esophagus. These effects may be minimized by taking the medications first thing in the morning before eating anything else, with 8 oz. of water, and standing upright for at least 30 minutes before ingestion.

- Raloxifene—from a class of drugs called Selective Estrogen Receptor Modifiers (SERMS), this medication has estrogen-like effects on bone (prevents bone loss) but does not increase the risk for breast cancer. Side effects can include hot flashes and blood clotting.
- Calcitonin—although it does not improve bone density as effectively as estrogen or the bisphosphonates, calcitonin slows bone loss, reduces spinal fractures, and eases pain associated with bone fractures. Calcitonin is considered an alternative for women who cannot take estrogen or biphosphonates.
- Parathyroid hormone—used in low doses, this drug can jump start bone production and increase bone mass. It is often prescribed for women who have low levels of estrogen, people who take corticosteroids, or women who are undergoing fertility treatment with gonadotropinreleasing hormone analogue.
- Testosterone—used to treat hypogonadism in men and in combination with estrogen to treat hot flashes in menopausal women. The effectiveness and long-term safety for women, however, is not known. Discuss potential use with your physician.
- Strontium Ranelate—used in a new class of "Dual Action Bone Agent" (DABA), increase bone mineral density, and unequivocally reduces risk of vertebral and nonvertebral fractures.
- Diacerein—beneficial in the treatement of osteoarthritis of hip or knee. It has unique action on cytokine cascade, halts degeneration, and stimulates regeneration, retards progression,

significant improvement in knee bending and excellent long-term tolerability and safety.

#### **Surgery and Other Procedures**

Although any bone can be affected by osteoporosis, fractures of the hip and spine are most serious. Hip fractures may cause permanent disability or even death. They almost always require hospitalization and major reconstructive surgery. People with osteoporosis caused by hyperparathyroidism may experience improved bone density from surgical removal of parathyroid glands. Other surgical procedures that help boost bone mass are currently under investigation.

#### **Nutrition and Dietary Supplements**

Eating fruits and vegetables and consuming adequate amounts of calcium and vitamin D are crucial in the prevention of osteoporosis. Keeping bones healthy throughout life depends on getting sufficient amounts of specific vitamins and minerals, including phosphorous, magnesium, boron, manganese, copper, zinc, folate, and vitamins B12, B6, C, and K. Avoiding sodium, alcohol, and caffeine will also enhance bone health.

#### Calcium

An inadequate supply of calcium over the lifetime is thought to play a significant role in contributing to the development of osteoporosis. Low intakes of calcium are associated with low bone mass, rapid bone loss, and high fracture rates. Recommended intakes of calcium for the prevention and/or treatment of osteoporosis are as follows:

- Children: 800 to 1200 mg/day
- Adolescent girls: 1200 to 1500 mg/day
- Premenopausal women (19 to 50 years old): 1000 mg/day
- Older adults (51 to 70 years old): 1200 to 1500 mg/day

(Recommended intake for older women is 1500 mg/day, except for those on estrogen, who need only 1000 mg/day).

Good dietary sources of calcium include low fat dairy products (such as milk, yogurt, and cheese), dark green, leafy vegetables (such as broccoli, collard greens, and spinach), sardines and salmon, tofu, and almonds. Since most people have difficulty obtaining the recommended amounts of calcium from their diets alone, supplements are an effective addition. Calcium citrate tends to be the most easily absorbed and digested form.

#### Vitamin D

Vitamin D plays a major role in calcium absorption and bone health. Vitamin D supplements and/or exposure to the sun (about 20 minutes a day), in combination with calcium, can help heal bone fractures and decrease the risk of future bone breaks. Recommended intakes of vitamin D for the prevention and/or treatment of osteoporosis are as follows:

Older adults (51 to 70 years old):
 400 IU/day; (71 years and older):
 600 IU/day

During the winter, or in the case of a bone fracture, 800 IU/day may be required.

#### Isoflavones

Isoflavones are substances that have estrogen-like effects on the body. Found primarily in soy products, isoflavones have been shown to increase bone density and slow bone loss in menopausal women. Results from several studies suggest that, in the years leading up to menopause, women may decrease their risk of osteoporosis by consuming soy products rich in isoflavones.

#### **Ipriflavone**

Ipriflavone, a synthetic isoflavone derived from natural isoflavones found in soy, red clover, and other food sources, may also be effective in preventing and treating osteoporosis. Although several studies have found that ipriflavone prevents bone loss and increases bone density in menopausal women, other large-scale studies have failed to support these findings. Results from one study suggest that ipriflavone may even cause lymphocytopenia, a condition characterized by abnormally low white blood cell count.

## **Essential Fatty Acids**

A deficiency in essential fatty acids (such as gamma-linolenic acid [GLA], found in evening primrose oil, and eicosapentaenoic acid [EPA], found in fish oil) can lead to severe bone loss and osteoporosis. Supplements containing essential fatty acids help maintain or increase bone mass. Essential fatty acids have also been shown to enhance calcium absorption, increase calcium deposits in bones, diminish calcium loss in urine, improve bone strength, and

enhance bone growth. Foods rich in essential fatty acids (including coldwater fish such as salmon and mackerel) may confer the same benefits.

Vitamin K

Studies show that women who consume vitamin K supplements may improve bone density and decrease their risk of bone fractures. The current recommended daily intake of vitamin K for adults is 75 to 120 mcg, but some researchers suggest that higher dosages may be necessary for optimal bone health. People taking blood-thinning medications such as warfarin should avoid vitamin K. The following nutrients show promise in the prevention and/or treatment of osteoporosis:

- Zinc—stimulates bone formation and inhibits bone loss in animals
- Vitamin C—may limit bone loss in early years of menopause but results are inconclusive
- Fluoride—increases bone mineral density but may increase risk of fractures
- Dehydroepiandrosterone (DHEA) available in supplement and cream form; studies have shown that cream applied to the inner thigh may boost bone density in older women
- Melatonin—loss of melatonin with age may contribute to development of osteoporosis, but further studies are needed to determine whether it helps to prevent or treat osteoporosis

#### Herbs

- Plack cohosh (Cimicifuga racemosa)—contains phytoestrogens (estrogen-like substances that help protect against bone loss); has been shown to relieve menopausal symptoms; used traditionally by Native Americans for musculoskeletal disorders
- Chaste tree (Vitex agnus castus)—
  used traditionally for menstrual and
  menopausal symptoms; may prove
  to have benefits for preventing or
  treating osteoporosis as well
- Red clover (Trifolium pratense) isoflavones extracted from this herb may slow bone loss in women, but

- it is not clear whether the whole herb has similar effects
- Wild yam (Dioscorea villosa) may be beneficial for menopausal symptoms and osteoporosis but further studies are needed
- Horsetail (Equisetum arvense) contains substances believed to strengthen bone
- Kelp (Fucus vesiculosus L.)—Used for disorders of the male and female reproductive systems as well as for musculoskeletal disorders; rich in minerals so may be an effective complementary treatment for osteoporosis
- Oat straw (Avena sativa)—boosts hormone levels that stimulate cell growth

#### Chiropractic

Chiropractic manipulation should not be applied to areas of the body directly affected by osteoporosis. However, spinal manipulation and/or gentle chiropractic techniques may be safely provided to areas of the body that are not affected by osteoporosis. Because many people with osteoporosis are elderly, chiropractors are trained to modify their techniques to the bone density level of each individual.

#### **Traditional Chinese Medicine**

Osteoporosis occurs when the bone marrow is not longer nourished, and, according to TCM, this results from exhaustion of kidney Yin energy. The acupuncturist would energize the *qi* at points that stimulate kidney energy. In addition to acupuncture, a Chinese practitioner would treat osteoporosis with a combination of herbs that boost estrogen levels and provide much-needed minerals for the skeleton.

Estrogen-boosting herbs includes:

- Black cohosh (Cimicifuga racemosa)
- Angelica (Angelic archangelica)
- Cypress (Cupressus sempervirens)
- Hops (Humuluis lupulus)
- Pomegranate husk (Punica granatum)
- Sage (Salvia officinalis)
- Ginseng (Asian ginseng)
- Licorice (Glycyrrhizia glabra)

#### Mineral-enhancing herbs

Horsetail (Equisetum arvense)

- Stinging nettle (Urtica dioica)
- Knotweed (Polygunum aviculare)
- Hemp nettle (Galeopsis dubia or Gaelopsis ochroleuca)
- Maërl (Lithothamnium calcareum)

In addition to these herbs, the Chinese practices of qi gong and tai chi, as well as other types of exercise may enhance muscle tone and improve balance and coordination, thereby reducing the risk of falls associated with osteoporosis.

## Other Considerations Warnings and Precautions

Some studies suggest that excessive intake of vitamin A may increase the risk for osteoporosis. People with osteoporosis, or those at risk for it, should not exceed the daily-recommended intake of vitamin A (900 mcg/day for men and 700 mcg/day for women) because high levels of this vitamin have been linked to decreased bone mineral density and an increased risk for hip fracture. The same is not true of carotenoids (a preformed version of vitamin A, such as beta-carotene). An appropriate balance of vitamin A-not to much and not too littleis necessary for normal bone development. There are also certain medications that may contribute to the development osteoporosis. For example, the long-term use of glucocorticoids, thyroid medications, blood-thinners, diuretics. antibiotics,

immune system suppressants, aluminumcontaining antacids, and gonadotropin releasing hormone analogs may cause bone loss.

#### **Prognosis and Complications**

Bone fractures are the most common complications of osteoporosis and are a significant cause of crippling disability and death. After age 60, 25% of women have a spinal fracture—and that percentage doubles after age 75. By age 90, 33% of women and 17% of men have had a hip fracture, usually resulting from a minor fall or accident, Many elderly people who suffer a hip fracture lose the ability to walk, become housebound, require institutionalization. and, most significantly, up to 36% die within one year. Although an estimated 1.5 million bone fractures in each year result from osteoporosis, most of these fractures are preventable. Several medications are currently being researched that may expand the treatment options available to people with osteoporosis. With continued research, the future for osteoporosis prevention and treatment is promising. In the meantime, a combination of medications (particularly estrogen treatment), diet, exercise, and certain herbs and supplements can ease the pain associated with bone fractures and help slow the progression of the disease.

## 114.Otitis Media; Ear Infection

Otitis media is an infection of the middle ear, the area just behind the eardrum. It happens when the eustachian tubes, which drain fluid and bacteria from the middle ear out to the throat, become blocked. Otitis media is common in infants and children, because their immune systems are immature and their eustachian tubes are easily clogged. Ear infections rarely happen in adults, however.

## Signs and Symptoms

Acute otitis media causes pain, fever, and difficulty in hearing. In infants, the clearest sign of otitis media is often irritability and inconsolable crying. Infants may not want to drink their bottle or they may pull on their ears. Other symptoms that may be associated with an ear infection include sore throat (pharyngitis), neck pain, nasal

congestion and discharge (rhinitis), headache, and ringing (tinnitus), buzzing, or other noise in the ear.

#### Causes

- Respiratory infection
- Allergies
- Tobacco smoke or other environmental irritants
- Infected or overgrown adenoids
- Sudden increase in pressure (such as during an airplane take off or landing)
- Drinking while lying on the back, such as with a propped bottle
- Excess mucus and saliva produced during teething
- Ruptured eardrum

## Risk Factors

- Recent illness (such as a cold or sinus infection)
- History of allergies (like hay fever, also called allergic rhinitis, or sinusitis)
- Attending day care, especially with more than 6 children at the center
- Large adenoids
- Exposure to second hand smoke
- Crowded or unsanitary living conditions
- Family members who are prone to ear infections
- High altitude
- Cold climate
- Bottle feeding
- Pacifier use

#### Diagnosis

Examine throat, sinuses, head, neck, and lungs. Using an instrument called an otoscope will look inside ears. If infected, there may be areas of dullness or redness or there may be air bubbles or fluid behind the eardrum. The fluid may be bloody or purulent (filled with pus). The physician will also check for any sign of perforation (hole or holes) in the eardrum. A hearing test may be recommended if child has had persistent (that is chronic and recurrent) ear infections. It is difficult to test hearing if child is less than two years old.

#### Preventive Care

- Don't expose child to second hand smoke.
- Reduce child's exposure to respiratory infections. For example, attending a day care with six or fewer children can lessen child's chances of getting a cold or similar infection; this, in turn, leads to fewer ear infections. Similarly, frequent hand and toy washing is also helpful.
- Always hold your infant in an upright, seated position during bottle-feeding. This prevents pooling of fluid and its associated risk of becoming infected.
  - Breastfeeding can make a child less prone to ear infections.
  - Avoid the use of pacifiers.
  - Pneumococcal vaccine prevents infections from the organism that

- most commonly causes acute ear infections and many respiratory infections.
- Giving lots of affection and helping your child learn to relax may help prevent colds and, therefore, ear infections.

#### **Treatment Approach**

The goals for treating ear infections include curing the infection, relieving pain and other symptoms, and preventing recurrent ear infections. If a bacterial infection is present, antibiotics are necessary. With that said, antibiotics tend to be overused for the treatment of ear infections. Uncomplicated ear infections in children over two years old can resolve within one week without antibiotics. In general, antibiotics are overused in the Western culture, leading to the growth and development of organisms that are resistant to these drugs. Finally, a virus, not a bacterium, causes many ear infections; antibiotics are intended to treat bacterial infections. Luckily, there are many alternative ways to treat the symptoms of ear infections and to prevent persistent and recurrent ear infections. For example, herbal eardrops and homeopathic remedies can be helpful for treating or preventing ear infections.

#### Lifestyle

Applying warm compresses (for example, using a warm clot or hot water bottle filled with warm water) may help relieve pain.

#### Medications

Antibiotics are prescribed to treat a bacterial infection. It is essential that the instructions for taking the drug (that is, how much, how often, and for how long) be followed carefully. The entire course of the antibiotic must be completed in order to avoid a relapse. The antibiotic most often prescribed for acute otitis media is amoxicillin. unless your child is allergic to penicillin in which case, there are several others from which your doctor will choose. If your doctor suspects a resistant organism, a different antibiotic will be selected.

For chronic otitis media or if child has a perforated eardrum or develops infection after tympanostomy tubes have been placed, antibiotic ear drops may be prescribed instead of oral antibiotics and continued for a long period of time (like a few months).

- Nasal sprays, nose drops, oral decongestants, or, occasionally, oral antihistamines may be used to promote drainage of fluid through the eustachian tubes.
- Eardrops may be prescribed to relieve pain.
- Over the counter oral medications for pain and/or fever may be used, like ibuprofen or acetaminophen. Aspirin should not be used in children.
- Rarely, oral corticosteroids may be prescribed to reduce inflammation.

#### Surgery and Other Procedures

If there is fluid in the middle ear and the condition persists, even with antibiotic treatment, a physician may recommend myringotomy (surgical opening of the eardrum) to relieve pressure and allow drainage of the fluid. This may or may not involve the insertion of typanostomy tubes referred to as ear Tympanostomy tube insertion is done under general anesthesia. Usually the tubes fall out by themselves or are removed. If adenoids and tonsils are enlarged, surgical removal may be considered, especially if you have chronic, recurrent ear infections. Similarly, surgical repair of a ruptured eardrum may be necessary to prevent recurrent ear infections.

## **Nutrition and Dietary Supplements**

Foods rich in antioxidants and other important chemicals that help boost immune function are important to include in child's daily diet. Such foods include fresh, darkly colored fruits and vegetables. Eating plenty of omega-3 fatty acids (a group of essential fatty acids that tend to reduce inflammation) may be important as well. Sources of omega-3 include fish, walnuts, flaxseeds. Children should not have these foods prior to ages 2 to 3 years old. Because supplements (like those described below) may have side effects or interact with medications, they should be taken only under the supervision of a knowledgeable physician.

Lactobacillus— a probiotic or "friendly"/healthy bacteria, may reduce the incidence of respiratory infections, like

colds and sinusitis, and their associated complications such as ear infections.

**Xylitol** – a sugar alcohol produced naturally in birch, strawberries, and raspberries has properties that fight pneumococcus, a bacteria that commonly causes ear and upper respiratory infections. Some studies are reporting that children who chew gum or take a syrup containing xylitol experience fewer ear infections than children who do not take xylitol.

#### Herbs

## Calendula, St. John's wort, Mullein flower, Garlic

Herbal specialists will often prescribe herbal eardrops containing one or all of these ingredients for ear pain or infection. The herbal eardrops contained a variety of herbal extracts including calendula, St. John's wort, mullein flower, and garlic. The researchers found that the combination of herbs in the eardrops was as effective as the medication ear drops in reducing the children's' ear pain.

#### Echinacea

The Native American medicinal plant known as coneflower (Echinacea angustifolia/Echinacea pallida/Echinacea purpurea) is one of the most popular herbs in America today. Used primarily to reduce the symptoms and duration of the common cold and flu and to alleviate the symptoms associated with them, such as sore throat (pharyngitis), cough, and fever, many herbalists also recommend echinacea to help boost the activity of the immune system and to help the body fight infections. For this reason, professional herbalists may recommend echinacea to treat ear infections.

#### Eucalyptus

Parts of the eucalyptus plant have the ability to fight infection, reduce inflammation, and lower fever. For this reason, eucalyptus is often found in remedies used to treat the common cold. Similarly, some herbalists prescribe a tincture made from eucalyptus leaves for chronic ear infections. It is important to note that children under 6 years old should not take eucalyptus leaves or oil by mouth and children under 2 should not apply the oil to the face or nose. Therefore, use of eucalyptus eardrops should be reserved for children older than 2 years and oral eucalyptus for children older than 6 years.

Other

Capsaicin, an active ingredient found in cayenne, may help prevent the development of ear infections for those at risk. Capsaicin has been used in homeopathic doses to treat ear infections. In test tube laboratory studies, tea tree oil demonstrates ability to fight many of the organisms that cause ear infections.

Chiropractic

Chiropractors report and preliminary evidence suggests that spinal manipulation treatments may benefit some children with otitis media. In one study involving 315 children with otitis media, a total of five spinal manipulations significantly improved symptoms after 11 days.

#### Homeopathy

- Aconitum -- for throbbing ear pain that comes on suddenly after exposure to cold or wind; and in children with high fever and whose ears have a bright red coloring
- Belladonna -- for sudden onset of infection with piercing pain that often spreads to the neck, flushed reddened ears. face including impaired (even agitation nightmares), consciousness and wide-eyed stare, high fever, and swollen glands; this remedy is most appropriate for children who feel relief when sitting upright and from warm compresses to the ear; this remedy should not be used in children whose symptoms persisted for more than 3 days
- Chamomilla -- for intense ear pain and extreme irritability and anger (including screaming); this remedy is most appropriate for children who are difficult to comfort unless being rocked or carried by a person who is walking back and forth
- Hepar Sulphuricum -- for sharp pains and a smelly, yellowish-green discharge that occur in the middle and late stages of an ear infection, particularly when the child is extremely moody and clearly angry; this remedy is most appropriate for individuals whose symptoms are worsened by cold air and improved by warmth

- Lycopedium— for right sided ear pain that is worse in the late afternoon and early evening; the child will generally say that his ears feel stuffed up and he may hear a ringing or buzzing sound; the appropriate individual tends to be insecure and need others around, although the personality type may act like a bully as a defense mechanism
- Mercurius
   — good for chronic ear infections; for acute or chronic pain that is worse at night and may extend down into the throat; relief comes from nose blowing; and the appropriate child may sweat or drool a lot and have bad breath
- Pulsatilla -- for infection following exposure to cold or damp weather; the ear is often red and may have a yellowish/greenish discharge; ear pain worsens when sleeping in a warm bed and is relieved somewhat by cool compresses; this remedy is most appropriate for children who tend to be gentle, weepy, and mildly whiny and are easily soothed by affection
- Silica
   — for chronic or late stage infection when the child feels chilly, weak and tired and sweating may also be present.

Other Considerations Warnings and Precautions

For a child under two, let the doctor know right away if he or she is experiencing a fever, even if no other symptoms are present. Also, if high fever or severe pain is present in a child, of any age, the doctor should be seen right away as well. It is possible that swimming will exacerbate an ear infection, particularly the pain from changes in pressure if swimming under water. If a ruptured eardrum is present, swimming is out of the question and even without a rupture; diving and swimming underwater should be avoided with an ear infection. If your child has ear tubes, use earplugs or cotton balls coated with petroleum jelly when swimming to prevent infection.

#### **Prognosis and Complications**

Most children will have minor, temporary hearing loss during and right after an ear infection. Other potential complications from otitis media include:

- Ruptured or perforated eardrum
- · Chronic, recurrent ear infections
- Enlarged adenoids or tonsils
- Mastoiditis (an infection of the bones around the skull)

- Meningitis (an infection of the brain)
- Formation of an abscess or a cyst (called cholesteatoma) from chronic, recurrent ear infections
- Speech or language delay in a child who suffers lasting hearing loss from multiple, recurrent ear infections; again, this is very unusual

#### 115.Pancreatitis

Pancreatitis is inflammation of the pancreas, may be either acute or chronic. Both acute and chronic pancreatitis can cause bleeding and tissue death in or around the pancreas. In a single episode of acute pancreatitis, the gland usually heals without causing functional or structural changes, but in the case of recurring pancreatitis, longterm damage is common. In chronic pancreatitis, smoldering attacks result in a slow deterioration of the structure of the pancreas and loss of pancreatic function. Necrotizing pancreatitis can lead to cyst-like pockets and abscesses. Because of the location of the pancreas, inflammation spreads easily.

#### Signs and Symptoms

- Severe, ongoing, sharp abdominal pain, often radiating to the back
- Nausea and vomiting
- Fever
- Sweating
- Abdominal tenderness
- Rapid heart rate
- Rapid breathing

#### What Causes It?

- Disease of the biliary tract and the formation of stones in the biliary tract can block the main duct of the pancreas as it enters the duodenum.
- Heavy alcohol use over a long period of time, which can raise protein levels in pancreatic juices.
- The drugs azathioprine, sulfonamides, corticosteroids, nonsteroidal anti-inflammatories (NSAIDs), and tetracyclines
- Infection with mumps, hepatitis virus, rubella, Epstein-Barr virus, and cytomegalovirus

- Abnormalities in the structure of the pancreas or the pancreatic or bile ducts, including pancreatic cancer
- High levels of triglycerides (fats) in the blood
- Surgery to the abdomen, heart, or lungs that temporarily cuts off blood supply to the pancreas, damaging tissue
- Injury resulting in compression of the pancreas against the spine

#### Who's Most At Risk?

- Biliary tract disease
- Binge alcohol use and chronic alcoholism
- Recent surgery
- Family history of high triglycerides
- Age (most common between ages 35 and 64)

#### What to be done

Blood tests, take X rays, and use ultrasound, computed tomography (CT) scans, and other procedures to determine the severity of condition and decide which treatment options are most appropriate.

## Treatment Options

### Treatment Plan

Mild edematous pancreatitis can usually be treated with intravenous fluids and by fasting, along with careful monitoring by the physician. Nasogastric suction reduces stomach secretions and prevents stomach contents from reaching the small intestine. Parenteral nutrition may be needed if the patient does not adequately recover within several days. For those with low blood pressure, low urine output, low levels of oxygen in the blood, or increased levels of red blood cells; more aggressive therapy may be required. For pancreatitis from high triglycerides, treatment includes weight loss,

exercise, fat-restricted diet, control of blood sugar for diabetics, and avoidance of alcohol and medications that can raise triglycerides, such as thiazide diuretics and beta-blockers.

**Drug Therapies** 

Painkillers such as meperidine may be prescribed. Antibiotics, such as ampicillin, ceftriaxone, and imipenem, may be given to treat or prevent infection in some cases.

Surgical and Other Procedures

With infected pancreatic necrosis, surgery is always required to damaged and infected tissue. Surgery may also be required to drain an abscess. For hemorrhagic pancreatitis, surgery will stop the bleeding and help restore pancreatic function. For chronic pancreatitis with pain that won't respond to treatment, a section of the pancreas may need to be removed. If the pancreatitis is a result of gallstones, a procedure called endoscopic retrograde. In cholangiopancreatography (ERCP), specialist inserts a tube-like instrument through the mouth and down into the duodenum where he or she can gain access to the pancreatic and biliary ducts.

Complementary Alternative and Therapies

Insufficient antioxidant levels in the blood (including reduced amounts of vitamin A, vitamin E, selenium, and carotenoids), may lead to chronic pancreatitis. Alcoholinduced pancreatitis is linked to low levels Antioxidant antioxidants well. as supplements may eliminate or minimize oxidative stress and help alleviate pain from chronic pancreatitis.

Nutrition

Low levels of antioxidants in the blood may make an individual more prone to develop pancreatitis; at the same time, someone who already has pancreatitis is more likely to develop following the deficiencies of nutrients:

- Magnesium particularly in the case of chronic alcoholism
- Methionine
- Selenium
- Vitamin A
- Vitamin C

Vitamin E Other potentially valuable supplements to take include:

- Vitamin B12; levels may be low with pancreatitis; works best in this case if given by injection.
- Soybeans; extracts of soybeans known as polyunsaturated phosphatidylcholines (PCs) work as antioxidants and have demonstrated prevention of damage to the pancreas in animal studies.

#### Herbs

Emblica officinalis (Indian gooseberry) is a traditional Ayurvedic medicinal plant used to treat pancreatic disorders. It is the richest natural source of vitamin C. Animal studies further suggests that this herb can be used to prevent development of pancreatitis.

The following, which are also, used commonly as both Western and Ayurvedic treatments of gastrointestinal disorders:

- Licorice root (Glycyrrhiza glabra)
- Ginger root (Zingiber officinale)
- Asian ginseng (Panax ginseng),
- Peony root (Paeonia officinalis)
- Chinese bark Cinnamon (Cinnamomum verum)

Animal studies further suggest the value of using these herbs in combination along with the following herbs:

- Bupleurum (Bupleri falcatum L)
- Pinelliae tuber (Pinelliae ternata)
- (Scutellariae Chinese skullcap baicalensis)
- Jujube (Zizyphi jujuba)

### Acupuncture

The value of acupuncture for treating pancreatitis is controversial. There are case reports stating that acupuncture has helped relieve pain from pancreatitis and pancreatic cancer.

**Prognosis/Possible Complications** 

pancreatitis Possible complications of include infection of the pancreas; cyst-like pockets that can become infected, bleed, or rupture; the failure of several organs (heart, kidney, lungs) and shock due to toxins in the blood; and diabetes. In mild edematous with inflammation pancreatitis, pancreas alone, the prognosis is excellent. Fewer than 5% of people with this form die. With severe tissue death and bleeding, or where inflammation is not confined to the pancreas, the death rate is 10 to 50% or higher, due to infection and other serious complications. In chronic pancreatitis, recurring attacks tend to become more severe.

Follow up

Patients with chronic pancreatitis should eat a low-fat diet, abstain from alcohol, and avoid abdominal trauma to prevent acute attacks and further damage. Those with high triglyceride levels should lose weight, exercise, and avoid medications, such as thiazide diuretics and beta-blockers that increase triglyceride levels. Given the recent reports suggesting that oxidative stress may contribute to the development of pancreatitis and that antioxidant supplementation may be of some benefit, physicians may begin recommending antioxidant nutrients to their patients with pancreatitis.

#### 116.Parkinson's Disease

Parkinson's disease is a progressive disorder of the central nervous system. It causes tremors and rigidity. The disease affects men and women equally, primarily after age 60. However, approximately 10 percent of those with the disease are under age 40. Although no cure for the disease is available at this time, drug therapy can help alleviate the symptoms.

#### Signs and Symptoms

- Shaking
- Poor balance
  - Stiffness and rigid limbs
  - Walking problems
  - Extremely slow movement
  - Involuntary eye closure

Secondary symptoms may include the following.

- Memory loss
- Constipation
- Sleep disturbances
- Dementia
- Speech, breathing, swallowing problems
- Stooped posture

#### What Causes It?

Parkinson's disease is caused by the loss of brain cells that produce the neurotransmitter dopamine, which affects muscle activity. The brain's inability to produce enough of these cells may be due to environmental factors (such as toxins or viruses), heredity, certain other brain chemicals, the aging process, and heroin use.

#### What to be done

He or she will rely largely on interviews with you and your family and may order brain scans to measure dopamine activity. Genetic testing may help identify a specific illness (like Huntington's disease) linked to the disease.

## Treatment Options Drug Therapies

Several drugs treat the symptoms of Parkinson's, but they do not cure the disease. Certain drugs used for the treatment of other diseases, especially glaucoma, heart disease, and high blood pressure, can influence the treatment of Parkinson's disease. Psychotherapy can help to cope with associated conditions such as depression. Speech, physical, and occupational therapy may help.

## Complementary and Alternative Therapies

Alternative therapies may provide relief of symptoms and slow the progression of the disease.

#### Nutrition

- Essential fatty acids are antiinflammatory. A mix of omega-6 (evening primrose, black currant, borage, pumpkin seed) and omega-3 (flaxseed and fish oils) may be best (2 tbsp. oil per day or 1,000 to 1,500 mg twice a day).
- Antioxidants vitamin C (1,000 mg three times a day), vitamin E (400 to 800 IU per day), and the trace mineral selenium (200 mcg) may slow progression of Parkinson's. Other antioxidants are alpha-lipoic acid, grape seed extract, and pycnogenol.
- A vitamin B complex is helpful.
- Vitamin B6 (10 to 100 mg per day) may help with symptom control, but should be given with zinc (30 mg per day).

- Manganese: excessive exposure increases the risk of Parkinson's.
- Amino acids: Low-protein diets may help control tremors. However, D-tyrosine (100 mg per kg per day) increases dopamine turnover.
- Glutathione: antioxidant (200 mg twice a day).
- Choline increases brain function; various forms include lecithin, phosphatidylcholine, and DMAE (dimethylaminoethanol).
- Neurotransmitters made from amino acids such as glutamic acid and GABA (gamma-aminobutyric acid) are used for Parkinson's.

#### Herbs

- Gotu kola (Centella asiatica): historic use in Parkinson's. One cup tea twice a day, or 30 to 60 drops tincture twice a day
- Ginkgo (Ginkgo biloba): circulatory stimulant and an antioxidant (as a supplement 120 mg per day)
- Hawthorn (*Crataegus monogyna*): circulatory stimulant, antioxidant (2 to 5 g per day)
- Milk thistle (Silybum marianum), globe artichoke (Cynara scolymus), and Bupleurum species provide liver support
- St. John's wort (Hypericum perforatum), skullcap (Scutellaria lateriflora), oats (Avena sativa), and lemon balm (Melissa officinalis)

help support the structure of the nervous system

#### Homeopathy

- Argentum nitricum for ataxia (loss of muscle coordination), trembling, awkwardness, painless paralysis
- Causticum for Parkinson's with restless legs at night, contractures
- Mercurius vivus for Parkinson's that is worse at night, especially with panic attacks
- Plumbum metallicum especially with arteriosclerosis
- Zincum metallicum for great restlessness, and depression

#### Massage

May help with increasing circulation and decreasing muscle spasm.

#### **Physical Medicine**

Chelation therapy may be effective if the Parkinson's is due to heavy metal toxicity or environmental toxins.

#### Acupuncture

May be helpful, particularly for the tremor involved.

#### Follow up

Since Parkinson's disease advances with time, you will need to be under constant medical care. Drug treatments often become less effective over time, and must keep a close eye on symptoms.

#### **Special Considerations**

Exercise will also help to improve mobility.

## 117.Pelvic Inflammatory Disease (PID)

Pelvic inflammatory disease (PID) is an infection of any of a woman's pelvic organs, including the uterus, ovaries, or fallopian tubes, or the peritoneum, the membrane covering the abdominal cavity. One million women are diagnosed with PID annually in the world. Acute PID comes on suddenly and tends to be more severe, whereas chronic PID is low-grade a infection that may cause only mild pain and sometimes backache. If not promptly, PID can result in infertility and, in rare cases, death.

Signs and Symptoms

The following signs and symptoms accompany acute PID.

- Severe pain and tenderness in lower abdomen
  - Vaginal discharge
- Fever

The following signs and symptoms accompany chronic PID.

- Mild, recurrent pain in lower abdomen
- Backache
- Irregular menstrual periods
- Pain during intercourse
- Infertility
- Heavy, unpleasant-smelling vaginal discharge

#### What Causes It?

PID occurs when bacteria from the vagina or cervix infiltrate the normally sterile pelvic organs.

#### Who's Most At Risk?

People with the following conditions or characteristics are at risk for developing PID.

- Frequent sexual encounters, many partners
- History of sexually transmitted diseases or previous history of PID
  - Young age (14 to 25 years old), particularly early age at first intercourse

#### What to be done

A combination of a physical exam, lab tests, imaging, and other procedures are used to make a diagnosis.

#### **Treatment Options**

#### Prevention

Barrier methods of birth control (condoms, diaphragms, vaginal spermicides) reduce the risk of PID. Rapid diagnosis and effective treatment of lower urinary tract infections can help prevent PID from developing. Experts recommend routine screening for infections in high-risk individuals.

#### **Treatment Plan**

May recommend hospitalization or outpatient treatment with follow-up. Outpatient therapy consists of rest and medications.

#### **Drug Therapies**

The following antibiotics or combination of drugs are useful.

- Cefoxitin
- Ofloxacin
- Clindamycin

## **Surgical and Other Procedures**

Some conditions, such as an abscess in the ovary or fallopian tube, may make surgery necessary.

#### Complementary and Alternative Therapies Nutrition

- Eat whole foods such as fresh vegetables, whole grains, and essential fatty acids (nuts, seeds, and cold-water fish)
- Avoid sugar, refined foods, and saturated fats (animal products, especially dairy)

Potentially beneficial nutrient supplements include the following.

- Vitamin C (1,000 mg three to four times per day), zinc (30 mg per day), selenium (200 mcg per day), vitamin E (400 IU per day), B-complex (50 to 100 mg, especially folic acid 800 mcg per day), and vitamin A (25,000 IU one to two times per day) or beta carotene (50,000 IU one to two times per day)
- Bromelain (500 mg three times per day between meals)
- Anti-inflammatory oils (for example, flax, borage, evening primrose) 1,500 mg two to three times per day
- Acidophilus (one capsule with meals)

#### Herbs

- For acute infection, combine half parts of yarrow (Achillea millefolium), pasque flower (Pulsatilla pratensis), marigold (Calendula officinalis), and poke root (Phytolacca americana) with part each of coneflower (Echinacea purpurea) and goldenseal root (Hydrastis canadensis). Take 30 to 60 drops tincture every two to four hours. Use caution with poke root.
- For chronic infection, combine equal parts of coneflower, goldenseal, licorice root (Glycyrrhiza glabra), myrrh gum (Commiphora molmol), wild indigo (Baptisia tinctoria), and red root (Ceonothus americanus). Take 30 drops tincture two to three times per day.
- Turmeric (*Curcuma longa*, 500 mg three times per day). Use with bromelain to enhance anti-inflammatory effects.

## **Physical Medicine**

Place a castor oil pack on the abdomen to reduce inflammation. Saturate a cloth with castor oil and apply directly to the skin, placing a heat source, such as a hot water bottle, on top. Leave in place for 30 minutes or more. Use for three to four consecutive days per week. Packs may be used daily.

Acupuncture

Acupuncture may help enhance immune function and reduce pain and inflammation, especially with chronic PID.

Prognosis/Possible Complications

In 85 percent of cases, the initial treatment succeeds, and in 75 percent of cases, patients do not experience a recurrence of the infection. However, when there is a recurrence, the likelihood of infertility increases with each episode of PID. Potential complications from PID include a

tubo-ovarian abscess; fallopian tube obstruction, which can result in ectopic pregnancy or infertility; chronic pelvic pain; and sexual dysfunction.

Follow up

Physician will schedule a follow-up visit 48 to 72 hours after treatment is started. If you are diagnosed with PID, you should inform any sexual partners so that they can be examined and treated if the infection has been transmitted.

## 118.Peptic Ulcers; Duodenal Ulcer; Gastric Ulcer; Stomach Ulcer;

Peptic ulcers are open sores or erosions in the lining of either the duodenum or the stomach. The duodenum is the first part of the small intestine. Contrary to popular belief, ulcers are not caused by spicy food or stress but, rather, are most commonly due to either an infection or long-term use of certain medications.

Signs and Symptoms

- Abdominal pain with a burning or gnawing sensation
- Pain 2 to 3 hours after eating
- Pain is often aggravated by an empty stomach; for example, nighttime pain is common
- Pain may be relieved by antacids or milk
- Heartburn
- Indigestion (dyspepsia)
- Belching
- Nausea
- Vomiting
- Poor appetite
- Weight loss

If you experience any of the following symptoms, this is considered an emergency:

- Sudden increase in the abdominal pain or sharpness in the quality of the pain
- Vomiting blood or material that looks like coffee grounds
- Blood in your stool or black, tarry stools

Causes

When the stomach's natural protections from the damaging effects of digestive juices (including acid and pepsin) stop working or the acid production is too

overwhelming for these protective defenses to work properly, you can get an ulcer. There are a few different ways this happens.

- Helicobacter pylori (H. pylori), a bacterial organism, are responsible for most ulcers. This organism weakens the protective coating of the stomach and duodenum and allows the damaging digestive juices to irritate the sensitive lining below.
- Non-steroidal anti-inflammatory drugs (NSAIDs) ongoing use of this class of medications is the second most common cause of ulcers. These drugs are acidic and they block prostaglandins, substances in the stomach that help maintain blood flow and protect the area from injury. Some of the specific drugs listed are more likely to produce ulcers than others; therefore, if you must use long-term pain medications, talk to your doctor about which ones are safest.
- syndrome Zollinger-Ellison uncommon this people with tumors in have condition duodenum pancreas and produce gastrin, a hormone that stimulates gastric acid production. precede ulcer Diarrhea may formation.
- Other causes of ulcers are conditions that can result in direct damage to the wall of the stomach or duodenum such as heavy use of alcohol, radiation therapy, burns, and physical injury.

#### **Risk Factors**

- Genetic factors may predispose you to developing an ulcer
- · Increasing age
- Chronic pain, from any cause such as arthritis, fibromyalgia, repetitive stress injuries (like carpal tunnel syndrome), or persistent back pain, leading to ongoing use of aspirin or NSAIDs
- Alcohol abuse
- Diabetes may increase your risk of having *H. pylori*
- Living in crowded, unsanitary conditions increases the risk of *H. pylori* infection
- Immune abnormalities may, in theory, make it more likely for H. pylori or other factors to cause damage to the lining of the stomach or duodenum.
- Lifestyle factors, including chronic stress, coffee drinking (even decaf), and smoking, may make you more susceptible to damage from NSAIDs or *H. pylori* if you are a carrier of this organism. Again, however, these factors do not cause an ulcer on their own.

#### Diagnosis

Take a detailed history of symptoms and risk factors, including for how long things like indigestion and pain have been present, how strong these sensations are, if you have lost any weight recently, what medications you have been taking, smoking and drinking habits, and if anyone in family has had ulcers. As part of the physical exam, doctor will do a thorough check of abdomen and chest as well as rectal exam to look for, in part, any sign of bleeding. A blood test will be drawn to check to see if you are anemic. These types of tests are done to make sure that you have not had any bleeding about which you have been unaware (called occult bleeding). If there are no signs of bleeding and symptoms are mild and not serious or threatening, life may have medications that suppress the amount of acid in stomach. This is done to see if you feel better, before pursuing expensive and uncomfortable testing. If symptoms persist or get worse despite the medication, then further testing is necessary.

One of two tests will be performed to try to identify an ulcer:

- Upper gastrointestinal (GI) series
- Endoscopy

For the upper GI, you drink a chalky liquid called barium and then a series of x-rays may reveal an ulcer. The endoscopy, which is more accurate, involves the careful insertion of a thin tube with a tiny camera at the end (called an endoscope) into mouth, down throat, through the esophagus to the stomach and duodenum. This allows both direct visualization of these organs for an ulcer or other problems and sampling of tissue from the walls (called biopsies) of the stomach and small intestines to test for H. pylori. Other tests that may be performed to look for H. pylori include a blood test checking for antibodies to this organism, a breath test after drinking a substance called urea, and a stool test looking for the organism in the feces. The breath test, which is the least invasive, is proving to be at least 95% accurate.

#### **Preventive Care**

Preventing NSAID-related ulcers involves finding different medications or alternative approaches to relieve pain. For example, COX-2 inhibitors (including celecoxib and rofecoxib) or acetaminophen instead. If you have to take NSAIDs for a long time, may consider prescribing a medication to try to prevent the development of ulcers like misoprostol, an H2 blocker (such cimetidine, famotidine, nizatidine, ranitidine), or a proton pump inhibitor (such as omeprazole, lansoprazole, pantaprazole or rabeprazole). There are also certain lifestyle measures that may make to less prone to get an ulcer from either NSAIDs or H. pylori.

## **Treatment Approach**

The main goals for treating a peptic ulcer include eliminating the underlying cause (particularly *H. pylori* infection or use of NSAIDs), preventing further damage and complications, and reducing the risk of recurrence. Medication is almost always needed to alleviate symptoms and must be used to eradicate *H. pylori*. Surgery is required for certain serious or lifethreatening complications of peptic ulcers and may be considered if medications are not working. Even with medications, many lifestyle factors, including making changes

in your diet, are important. Plus, certain herbs, acupuncture, or homeopathy may prove to be a useful addition to usual medical care, especially to help relieve symptoms or prevent recurrence.

Lifestyle

poctors used to recommend eating bland foods with milk and only small amounts of food with each meal. Dietary and other lifestyle measures that should however, include:

- Eat a diet rich in fiber, especially from fruits and vegetables; this may reduce your risk of developing an ulcer in the first place and may speed your recovery if you already have one. The vitamin A may be an added benefit from these foods.
- Foods containing flavonoids, like celery, cranberries (including cranberry juice), onions, and tea may inhibit the growth of H. pylori.
- Ouit smoking
- Receive treatment for alcohol abuse; your doctor can help get you appropriate care
- Cut down on coffee, including decaffeinated coffee, as well as carbonated beverages all of which can increase stomach acid
- Reduce stress with regular use of relaxation techniques such as yoga, tai chi, qi gong, or meditation. To incorporate any one of techniques into your daily activities, consider taking a class; some early information suggests that, if you have an ulcer, a formal program may be more beneficial listening to tapes on your own at home.

Medications

If you have H. pylori, you will three probably be prescribed "Triple medications. different therapy" (including a proton pump inhibitor to reduce acid production and two antibiotics to get rid of the organism) is commonly used to pylori-related treat H. Instead of one of the antibiotics, bismuth salicylate may be the third medication recommended.

rather than three, drug regimens are currently being developed.

Some of the same drugs are used for non-H. Pylori ulcers as well as for symptoms (like indigestion) due to ulcers of any cause:

- Antacids, may relieve heartburn or indigestion but will not treat an ulcer
- H2 blockers, such as cimetidine, ranitidine, nizatidine, famotidine, reduce gastric acid secretion.
- Misoprostol - can be used preventively if you take a lot of NSAIDs because it helps to protect the stomach from the damaging effects of these painkillers. Does not cure existing ulcers.
- Proton-pump inhibitors, including esomeprazole, lansoprazole, omeprazole, pantoprazole rabeprazole, decrease gastric acid production. This is the number one choice of medications for treating ulcers.
- Sucralfate makes a coating over the ulcer crater, protecting it from further damage

Surgery and Other Procedures

Once hospitalized, if bleeding from an ulcer does not stop by using medications and supportive care (like fluids and, possibly, blood transfusion), it can almost always be stopped via endoscopy. The physician who performs the procedure first identifies the ulcer and the area that is bleeding. Then, that physician injects adrenaline and other medications to stop the bleeding stimulate the formation of a blood clot. If the bleeding recurs after that procedure or have a perforated ulcer or obstruction, surgery may be required. Also, if you do not get better from medical or endoscopic treatment, surgery may considered. Approximately 30% of people who come to the hospital with a bleeding ulcer need endoscopy or surgery.

**Nutrition and Dietary Supplements** Gamma-linolenic acid (GLA)

Very preliminary evidence from test tube and animal studies suggest that gammalinolenic acid (GLA) from evening primrose oil (EPO) may have anti-ulcer properties. GLA is an essential fatty acid (EFA) in the omega-6 family that is found primarily in plant-based oils, including EPO and borage seed oil.

#### Omega-3 Fatty Acids

In animal studies, treatment with omega-3 fatty acids reduced the risk of ulcers caused by NSAIDs. More research is needed to evaluate whether omega-3 fatty acids (like ALA found in flaxseed and flaxseed oil or EPA and DHA found in fish and fish oil) would have the same effects in people.

#### **Probiotics**

Healthy or "friendly" organisms, called probiotics, inhabit the lining of the intestines and protect us from the entrance of "bad" infections that can cause disease. Lactobacillus acidophilus (L. acidophilus) is the most commonly used probiotic. In test tube studies, L. acidophilus and other probiotics were able to kill or slow down the growth of H. pylori; research is needed to understand whether that benefit would occur in people. One way in which probiotics may help is by reducing side effects, such as diarrhea and taste disturbance, from medications used to treat H. pylori

#### Vitamin C

In one study, high-dose vitamin C treatment for four weeks effectively treated *H. pylori* infection in some, but not all, people. In addition, *H. pylori* appears to impair absorption of vitamin C. Having lower than average levels of vitamin C may play a role in the higher risk of stomach cancer for those with this organism in their gastrointestinal tract.

#### Herbs

- Astragalus
   membranaceus) used traditionally
   to treat stomach ulcers.
- Barberry (Berberis vulgaris)- This
  herb contains active substances
  called berberine alkaloids. These
  substances have been shown to
  combat infection and bacteria. For
  this reason, barberry is used to ease
  inflammation and infection of the
  gastrointestinal tract. Barberry has
  also been used traditionally to
  improve appetite.
- Bilberry (Vaccinium myrtillus) Studies in rats have found that
  anthocyanidins (an antioxidant)
  from bilberry fruits help prevent

- stomach ulcers related to a variety of factors including stress, medications, and alcohol. Whether this will translate into help for people requires research.
- Cat's Claw (*Uncaria tomentosa*) The bark and root of this herb have been used among indigenous people of the rainforest for centuries to treat a variety of health problems including ulcers and other gastrointestinal disorders. The benefits of this herb may be due to its ability to reduce inflammation.
- Cranberry (*Vaccinium spp*) may have properties that help prevent *H. pylori* infection.
- Dong Quai (Angelica sinensis) animal studies suggest that dong quai may soothe ulcers, but studies in people are needed before a definitive conclusion can be drawn.
- Garlic (Allium sativum) some studies suggest that high amounts of garlic may protect against stomach cancer, potential which is a complication of H. pylori peptic ulcers. This controversial, is however, and high amounts garlic may in fact cause gastrointestinal distress.
- Licorice (Glycyrrhiza glabra) this herb is a demulcent (soothing, coating agent) that has long been valued for its use in food and medicinal remedies. including treatment of ulcers. Some licorice extracts, known deglycyrrhizinated licorice (DGL), still have the healing properties of licorice without the harmful effects (like high blood pressure). DGL may be better for stomach duodenal ulcers than Glycyrrhiza glabra and may even prove as effective as some prescription drugs for stomach ulcers.
- Slippery elm (Ulmus fulva) Although there has been little
  scientific research on slippery elm,
  it has a long history of use based on
  clinical experience. Gastritis
  (stomach inflammation) and peptic
  ulcer are among the conditions that

seem to respond well to slippery elm.

Turmeric (Curcuma longa) -Turmeric has long been used in both Ayurvedic and Chinese medicine to digestive disorders. treat example, extracts of turmeric root reduced the release of acid from the and protected against stomach such as gastritis or injuries inflammation of the intestinal walls and ulcers. (Note: at very high doses, turmeric may induce ulcers. It is very important to stick with the dose recommended by an herbal specialist.)

#### Other

The combination preparation used in these animal studies included:

- Angelica (Angelica archangelica)
- German chamomile (Matricaria recutita)
- Lemon balm (Melissa officinalis)
- Licorice
- Milk thistle (Silybum marianum)
- Peppermint (*Mentha x piperita*)

  Additional herbs that have been used clinically by herbal specialist to treat peptic ulcers include:
  - Calendula (Calendula officinalis) -used in the United States during the
    19th century to treat stomach ulcers
  - Capsaicin the active ingredient in cayenne (Capsicum frutescens/Capsicum spp)
  - Marshmallow (Althea officinalis)

Homeopathy

Argentum nitricum for abdominal bloating with belching and pain

- Arsenicum album for ulcers with intense burning pains and nausea; especially for people who cannot bear the sight or smell of food and are thirsty.
- Kali bichromicum for burning or shooting abdominal pain that is worse in the wee hours of the morning (that is, after midnight)
- Lycopodium for bloating after eating with burning that lasts for hours; especially for people who feel hungry soon after eating and wake hungry.

- Nitric acid for sharp, shooting pain that worsens at night and is accompanied by feelings of hopelessness and even fear of dying
- Nux vomica for digestive disturbances (including heartburn and indigestion) that worsen after eating; particularly for those who crave alcohol, coffee, and tobacco
- Phosphorus for burning stomach pain that worsens at night; those for whom this remedy is appropriate tend to feel very thirsty, craving cold beverages
- Pulsatilla for symptoms that vary a lot (that is, change abruptly) and pain that gets worse from fatty foods; appropriate people are distinctly not thirsty

#### Acupuncture

Acupuncture has been used traditionally for a variety of conditions related to the gastrointestinal tract, including peptic ulcers.

#### Chiropractic

Chiropractors report and preliminary evidence suggests that spinal manipulation may benefit some individuals with uncomplicated gastric or duodenal ulcers. In one small study, researchers compared the effectiveness of medication to spinal manipulation over a period of up to 22 days. Participants who received spinal manipulation experienced significant pain relief after an average of 4 days and were completely free of symptoms an average of 10 days earlier than those who took medication.

## Other Considerations Pregnancy

If you are pregnant or breastfeeding, you should consult with physician before taking any medication, including herbs. Borage seed oil, and possibly other sources of GLA, should not be used during pregnancy because they may be harmful to the fetus and induce early labor.

## Warnings and Precautions

Individuals with peptic ulcers should not take the herbs devil's claw (Harpagophytum procumbens) or green tea (Camellia sinensis).

#### **Prognosis and Complications**

With proper treatment, most ulcers heal within 6 to 8 weeks. However, they may recur, particularly if *H. pylori* are not treated sufficiently. Complications from ulcers include bleeding, perforation (rupture) of either the stomach or the duodenum, and bowel obstruction. Bleeding, which is much less common today because of appropriate and fast medical treatment, occurs in up to 15% of people with peptic ulcers. Obstruction tends to happen where the stomach meets the small intestines. If there is an ulcer at this junction, swelling can

occur, blocking the passage of food products through the gastrointestinal tract. If this happens, significant vomiting is generally the main symptom. *H. pylori* ulcers increase the risk of stomach cancer. The good news is that the incidence of ulcers and its complications continues to decline as people seek treatment for symptoms early and doctors respond quickly to eliminate symptoms and the causative agents, like *H. pylori* and NSAIDs.

#### 119.Pericarditis; Heart Infection

Pericarditis is an inflammation of the pericardium, a sac surrounding the heart. most common form is acute pericarditis, which can usually be treated without hospitalization. Common adolescents and young adults. acute pericarditis affects males more than females. Pericardial effusion is a form that results when fluid builds up in the pericardium. It is a more serious condition that can require hospitalization and possibly surgery. Constrictive pericarditis is a form that is a chronic condition and worsens gradually over a long period of time. It may ultimately require surgery. Pericardial effusion and constrictive pericarditis can occur together.

### Signs and Symptoms

The signs and symptoms of pericarditis vary somewhat.

#### Acute pericarditis:

- Chest pain
- Fever
- Flushed appearance
- Muscle pain
- Pain with swallowing
- Feelings of anxiousness, discomfort, or uneasiness

#### Pericardial effusion:

- · Difficulty breathing
- A bluish skin color

#### Constrictive pericarditis:

- Difficulty breathing
- Congestion in the lungs
- Fatigue
- Abdominal swelling

#### What Causes It?

Acute pericarditis and pericardial effusion have a large number of possible causes, including viruses, bacteria, fungi, cancer, trauma to the heart (such as chest injury), drug reactions and radiation exposure. Constrictive pericarditis usually results from repeated cases of acute pericarditis.

#### What to be done

Examine the heart and lungs, take pulse, and probably tap chest and back. A number of tests may include blood work, an electrocardiogram, an echocardiogram, chest X ray, computed tomography (CT) scan, or magnetic resonance imaging (MRI).

## **Treatment Options**

Pericarditis is usually treated with aspirin or nonsteroidal anti-inflammatory drugs (NSAIDs, such as ibuprofen), but steroid medications may be prescribed.

## Complementary and Alternative Therapies

Hawthorn (Crataegus monogyna) is a cardiac tonic with very low toxicity that could be used along with whatever therapy deems most appropriate.

#### Nutrition

- Vitamin C (1,000 mg three times per day) may help decrease inflammation. It also aids in fighting infection, and is an antioxidant.
- Coenzyme Q10 (50 mg bid) is an important antioxidant that may help prevent heart muscle damage and speed recovery.

- Your provider may recommend sodium restriction if you have constrictive pericarditis.
- If your pericarditis is of viral origin, your provider may recommend supplementation with vitamin A (300,000 IU/day for 3 days).
- Flaxseed oil (3 g twice per day) helps decrease inflammation.
- Avoid saturated fats, alcohol, and sugars, which can lead to increased inflammation and lowered immune function.
- Consume at least five servings of fruits and vegetables per day. These foods are anti-inflammatory and protect the heart.

#### Herbs

- Hawthorn (Crataegus monogyna) can help prevent high blood pressure and hardening of the arteries. Dose is 60 drops tincture three times per day 1 tsp. berries steeped for 10 minutes in hot water, or 100 to 250 mg, three times per day as a supplement.
- Linden (Tilia cordata) is used for high blood pressure with nervous tension, and may be useful adjunctive treatment where there is anxiety. Dose is 1 tsp. dried blossoms per cup hot water three

- times a day or 60 drops tincture three times a day.
- Blue monkshood (Aconitum napellus) has been described as an herbal remedy for pericarditis without significant effusion.
   CAUTION: As this herb can be highly toxic, even fatal, it is not recommended unless prescribed by an experienced physician.

#### Homeopathy

- Aconite for sudden, sharp pains accompanied by anxiety (especially fear of dying) and restlessness
- Spongia tosta for the sensation that the chest will explode, anxiety, light-headedness, sweating; patient may be flushed
- Cactus grandiflorus for the feeling that there is a band around the chest or a great weight on the chest; palpitations; feels better in the open air and worse at night

#### Acupuncture

Can be very helpful in decreasing inflammation, enhancing immune response, and regulating cardiac function.

#### Follow up

Doctor may order a follow-up X ray or electrocardiogram.

## 120.Peritonitis; Abdominal Wall Inflammation

Peritonitis is an inflammation of the peritoneum, the thin membrane that lines the abdominal wall and covers most of the organs of the body. Primary peritonitis is caused by the spread of an infection from the blood and lymph nodes to the peritoneum. This type of peritonitis is rare—less than 1% of all cases of peritonitis are primary. The more common type of peritonitis, called secondary peritonitis, is caused by the entry of bacteria or enzymes into the peritoneum from the gastrointestinal or biliary tract. Both cases of peritonitis are very serious and can be life threatening if not treated properly.

Signs and Symptoms

 Swelling and tenderness in the abdomen; pain can range from dull aches to severe, sharp pain causing board-like rigidity

- Fever and chills
- Loss of appetite
- Nausea and vomiting
- Increased breathing and heart rates
- Shallow breaths
- Low blood pressure
- Limited urine production
- Inability to pass gas or feces

#### Causes

The cause of primary peritonitis is infection in the blood. It occurs most commonly in individuals with liver disease. Fluid accumulates in the abdomen, creating a prime environment for the growth of infectious microorganisms. Secondary

peritonitis is caused by the spillage of or bile into bacteria, enzymes, peritoneum from a hole or tear in the gastrointestinal or biliary tracts. Such tears can occur as a result of an infected organ, such as a ruptured appendix, or as a complication from surgery.

#### Risk Factors

- Liver disease (cirrhosis)
- Kidney damage
- Fluid in the abdomen
- Compromised immune system
- Pelvic inflammatory disease

Risk factors secondary for peritonitis include:

- Appendicitis (inflammation of the appendix)
- Stomach ulcers
- Torn or twisted intestine
- Severely inflamed gallbladder
- Damage to the pancreas
- Inflammatory bowel disease, such as Crohn's disease or ulcerative colitis
- A twisted intestine that can cause obstruction
- Injury caused by an operation
- Continuous ambulatory peritoneal dialysis (CAPD) - a procedure used for people with end-stage renal disease
- Trauma

#### Diagnosis

Given that peritonitis can be a lifethreatening condition, the physician will first conduct a physical examination to determine whether surgery to correct the underlying problem is necessary. During the physical exam, the physician will feel and press the abdomen to detect any swelling and tenderness in the area as well as signs that fluid has collected in the area. He or she may also listen to bowel sounds and check for difficulty breathing, low blood pressure, and signs of dehydration. The following procedures may be included to confirm the diagnosis of peritonitis:

- Blood tests identifies microorganism causing condition
- Samples of fluid from the abdomen identifies the microorganism causing the condition

- CT scan identifies fluid in the abdomen, an accumulation of pus, or an infected organ
- Chest X rays detects air in the abdomen, which indicates that a torn or perforated organ may be present
- Peritoneal lavage large amounts of fluid may be injected into the peritoneum and removed to wash out any microorganisms causing the condition

#### **Preventive Care**

The best way to prevent serious complications associated with peritonitis is to seek medical attention as soon as symptoms appear.

### **Treatment Approach**

Hospitalization is common. Surgery is often necessary to remove the source of infection, such as an inflamed appendix, or to repair a tear in the walls of the gastrointestinal or biliary tract. Antibiotics are prescribed to control infection and intravenous therapy is used to restore hydration. Once these steps have been taken, some dietary supplements, including glutamine and arginine, omega-3 and omega-6 fatty acids, vitamins A, E, and zinc, and various Chinese herbs may be used in addition to antibiotics to aid in the healing process, particularly during recovery.

#### Medications Antibiotics

Antibiotic medications inhibit the growth of microorganisms and prevent further spread of infection. The antibiotics prescribed vary, depending on the type of peritonitis and the organism causing the condition.

## Morphine

Morphine may be prescribed in the hospital to reduce pain.

## **Surgery and Other Procedures**

Surgery is often necessary for individuals with both primary and secondary peritonitis. Most surgical procedures are designed to locate the source of the bacterial infection, to drain excess fluid, and to remove or repair damaged tissue.

**Nutrition and Dietary Supplements** Glutamine and Arginine (amino acids)

A diet supplemented with glutamine and arginine may protect the lining of the intestine inhibit the growth of bacteria, and

improve survival rates in animals with peritonitis. Diets high in glutamine, arginine, and omega-3 fatty acids may lower the risk of infection by more than 50%, shortening the length of hospital stay.

Omega-3 and Omega-6 Fatty Acids

Omega-3 fatty acids, found in cold-water fish such as salmon and mackerel, improve resistance to infection and therefore may aid in the healing of peritonitis. A proper balance of omega-3 and omega-6 fatty acids (found in some vegetable oils) may reduce the symptoms of peritonitis more effectively than either type of essential fatty acid alone.

#### Vitamin A

Vitamin A may enhance the immune system and inhibit the growth of bacteria. This supplementation may prove to enhance the effects of antibiotic therapy for peritonitis in humans.

#### Vitamin D

Vitamin D may contribute to improved immune defenses within the peritoneal cavity for those on CAPD.

#### Vitamins E and C

Antioxidant nutrients, such as vitamins E and C, may boost the immune response and protect the body against some secondary complications of peritonitis, such as respiratory infection.

#### Zinc

Zinc is known to play an important role in maintaining immune function, and some researchers suggest that supplementation may aid in the healing process.

#### Herbs

In China, the following herbal formula is used in conjunction with antibiotics to treat peritonitis associated with CAPD:

- Bupleurum (Bupleuri falcatum L)
- Skullcap (Scutellaria lateriflora)
- Bitter orange (Citrus aurantium)
- Pinelliae tuber (Pinelliae ternata)
- Peony root (Paeoniae lactiflora)
- Corydalis root (Corydalis rhizoma)
- Rhubarb (Rheum palmatum)
- Honeysuckle flower (Lonicerae flos)
- Dandelion (Taraxacum officinale)

In addition, professional herbalists typically would not recommend herbs as the primary treatment for peritonitis, but they may recommend the following as a therapy to supplement conventional medicine:

- Echinacea root (Echinacea purpurea) to boost the immune system
- Mushrooms, such as reishi
   (Ganoderma) to boost the immune system
- Milk thistle (Silymarin officinalis) to protect the liver
- Nettles (*Urtica dioca*) to protect the liver

#### Homeopathy

- Deadly nightshade (Belladonna) for individuals who are hypersensitive to touch, have sudden attacks of pain that come and go, and have a high fever
  - Trioxide of arsenic (Arsenicum album) – for individuals with a swollen abdomen, unquenchable thirst, extreme chills, and symptoms that worsen at night
  - Bushmaster snake (Lachesis) for individuals with a hot abdomen and a painful stiffness radiating down to the thighs

## Other Considerations

### **Prognosis and Complications**

Complications from peritonitis can include the following:

- Sepsis an infection throughout the blood and body that can potentially cause multiple organ failure
- Abnormal clotting of the blood (generally due to significant spread of infection)
- Formation of fibrous tissue in the peritoneum
- Adult respiratory distress syndrome— a severe infection of the lungs
- Some forms of chronic peritonitis do not respond to treatment

### 121.Pertussis; Whooping Cough

Pertussis is a violent cough, vaccine for pertussis was developed in sometimes called whooping cough. A

1948. The disease is rising again because fewer people are getting vaccinated.

#### Signs and Symptoms

The three phases of the disease are listed below.

Catarrhal phase (lasts one to two weeks):

- Upper respiratory infection; begins like the common cold
- Low-grade fever (less than 100.4°F)
- Loss of appetite

Paroxysmal phase (lasts one to four weeks):

- Cough increases (2 to 50 times a day) and fever decreases
- Sudden, forceful breathing in causes the whooping sound
- A sudden intense bout of coughing (paroxysms) causes bulging and tearing eyes, tongue sticking out, and bluish discoloration
  - Vomiting or choking may follow coughing bouts

Convalescent phase (lasts two weeks to several months):

· Cough slowly goes away

#### What Causes It?

A type of bacteria causes pertussis, and it is spread through droplets coughed into the air. It is a highly contagious disease.

#### What to be done

Prescribe an antibiotic, which helps prevent the disease from spreading. Patients with complications, severe coughing bouts, or who is under one year of age are hospitalized.

#### **Treatment Options**

Quarantine, parenteral fluid and nutrition, oxygen supplementation, and mechanical ventilation may be required.

#### **Drug Therapies**

- Antibiotics—(usually erythromycin) reduce transmission and are effective even for infants.
- Corticosteroids such as betamethasone (0.075 mg daily per kilogram of body weight) may reduce severity and length of coughing fits, especially in infants.
- Albuterol (0.3 to 0.5 mg daily per kilogram of body weight) reduces the severity of coughing fits
- Do not use cough suppressants.

### Surgical and Other Procedures

- In cases of loss of consciousness, immediate resuscitation is essential to avoid brain damage and death.
- Suctioning of secretions, oxygen administration, parenteral fluids and electrolytes are used for infants and in those with protracted illness.
- Mist by tent may benefit infants.

## Complementary and Alternative Therapies

Pertussis can be treated with nutrition, herbs, and homeopathy.

#### Nutrition

Note: Doses given are for children. Adults should double the amounts.

- Eliminate dairy, bananas, wheat, and meat products.
- Encourage small, frequent meals of vegetable broths, steamed vegetables, and fresh fruit (especially pineapple and grapes).
- Vitamin C (200 to 500 mg two times per day), zinc (10 to 15 mg per day), and beta-carotene (10,000 to 25,000 IU per day).

#### Herbs

Catarrhal stage: Choose two herbs from each of the first three categories. Combine in equal parts in a tea (½ cup every three to four hours), a tincture or glycerite (30 drops every three to four hours).

Paroxysmal stage: In addition to the above formula, combine 2 parts of catnip with two to four of the other antispasmodic herbs in a tincture or glycerite (20 drops every one to two hours).

Immune-stimulating herbs:

- Coneflower (Echinacea purpurea)
- Usnea lichen (Usnea spp.)
- Garlic (Allium sativum)
- Astragalus (Astragalus membranaceus)

### **Expectorants:**

- Licorice root (Glycyrrhiza glabra)
- Elecampane (Inula helenium)
- Mullein (Verbascum densiflorum) Antiseptics:
  - Thyme (Thymus vulgaris)
  - Hyssop (Hyssopus officinalis)
  - Anise seed (Pimpinella anisum)

## Antispasmodics:

• Indian tobacco (Lobelia inflata) (not more than 1/4 of combination)

- Catnip (Nepeta cateria)
- Chamomile (Matricaria recutita)
  - Cramp bark (Viburnum opulus)
  - Valerian (Valeriana officinalis)

#### Homeopathy

- Aconite -- should be taken during the first 24 hours that symptoms appear, particularly if they develop following exposure to cold weather; this remedy is most appropriate for individuals with a hoarse, dry, cough who complain of dry mouth, thirst, restlessness, worsened symptoms from cold air and/or lying on the side, and being awakened from the cough
- Drosera -- for dry, spasmodic cough with sharp chest pain and a tickling sensation in the throat that may cause the individual to gag, choke or vomit; this remedy is most appropriate for individuals who tend to be hoarse, become worse when lying down, and perspire during the night
- Hepar sulphuricum -- for later stages of pertussis with wheezing, little mucus production, and coughing that comes on when any part of the body gets cold
- Ipecacuanha -- spasmodic cough and gagging or vomiting; this remedy is commonly prescribed for infants
- Phosphorus -- for several different types of cough, most particularly a dry, harsh cough described as a persistent tickle with sharp chest pain signified by the individual clutching his or her painful chest; this remedy is most appropriate for individuals who are often worn out and exhausted, have undue anxiety, even fear of death and require a lot of reassurance

• Spongia -- for harsh, barking cough that produces no mucus and is associated with a tickling in the throat or chest that worsens when lying down improves when the individual eats or drinks warm liquids; this remedy is often used if Aconite was not successful

#### Physical Medicine

- Chest rubs. Use 3 to 6 drops of essential oil (camphor, thyme, eucalyptus, rosemary) with 1 tbsp. food-grade oil (almond, flax, or olive).
- Castor oil pack. Apply oil directly to chest, cover with a clean soft cloth and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes. Use daily.
- Place 3 to 6 drops of essential oil in a humidifier or a warm bath.
- Alternating hot and cold applications to the chest or back.
   Alternate three minutes hot with one-minute cold.
- Warming sock treatment. Before bed, place cold, damp socks on warmed feet and cover with dry wool socks overnight.

#### Acupuncture

May enhance immunity and decrease duration and severity of infection.

#### Massage

Foot massage has a relaxing effect and can help induce sleep.

#### Follow up

Complete recovery is expected unless there are complications.

#### **Special Considerations**

Vaccinations are 80 to 90 percent effective. They last about 12 years.

### 122.Pharyngitis; Sore Throat

Pharyngitis is inflammation of the back of the throat. This results in a sore throat, which is discomfort, pain, or scratchiness in the throat. Swallowing can be mildly painful as well. Sore throats,

which are often caused by an infection, are very common, especially in children.

#### Signs and Symptoms

The symptoms of pharyngitis may include the following:

Sore throat

- Pain when swallowing
  - Fever
  - Enlarged lymph nodes in your neck
  - · Runny nose and postnasal drip
  - Headache
  - In rare cases, difficulty breathing

#### Causes

Certain viruses or bacteria can infect your throat and cause it to swell. You can catch such organisms through direct contact with someone who has one of these infections. They are passed via nasal secretions and saliva. Viruses that cause pharyngitis include the common cold, the flu, and mononucleosis (often called "mono"). Bacteria like Group A sterptococcus can also cause pharyngitis.

#### **Risk Factors**

- Cold and flu seasons
- Someone living in your house has a sore throat or cold

#### Diagnosis

Check temperature and examine throat, sinuses, ears, nose, lungs and neck, including feeling for swollen lymph nodes, which may indicate strep throat. A swab from throat may be taken to test for strep infection. A blood test may be done to check for mononucleosis. If concerned about possible mono, examine abdomen looking for an enlarged liver or spleen and feel for lymph nodes in body in places in addition to neck.

#### **Preventive Care**

- Avoid kissing or sharing cups and eating utensils with anyone who has pharyngitis, a cold, flu, mononucleosis, or bacterial infection.
- Avoid any irritants that might affect your throat, such as smoke from cigarettes, cigars, or pipes.

### **Treatment Approach**

If physician suspects that you have the bacterial form of pharyngitis, or that is confirmed by a strep test, prescribe an antibiotic. Pharyngitis that stems from a viral cause has no specific treatment beyond bed rest and simple forms of self-treatment, such as gargling and aspirin or acetominophen.

#### Lifestyle

- Rest
- Drink lots of fluid

- Avoid drinking alcohol
- Gargle several times per day with ½ tsp. of salt in a glass of warm water
- Try throat lozenges but do not give to a child under 3 years old because this is a choking hazard.

#### Medications

Antibiotics like Penicillin or, if an allergy to penicillin, erythromycin is most commonly prescribe. If the viral form of pharyngitis, probably advised to treat you at home. Aspirin, acetaminophen or other over-the-counter pain medicines will help relieve the pain and soreness in throat.

#### **Nutrition and Dietary Supplements**

Although not without controversy, certain supplements may help reduce the length of time of cold and, therefore, its symptoms. Such supplements include:

- · Vitamin C
- Zinc

#### Herbs

#### Barberry (Berberis vulgaris)

Barberry is used to ease inflammation and infection of the respiratory tracts including pharyngitis, sinusitis, rhinitis (nasal congestion), and bronchitis.

# Echinacea (Echinacea angustifolia/Echinacea pallida/Echinacea purpurea)

Echinacea, also called purple coneflower, is used to shorten the duration of the common cold and flu and to relieve the symptoms associated with them, such as sore throat, cough, and fever.

## Eucalyptus (Eucalyptus globulus)

Eucalyptus is commonly used in remedies to treat coughs and the common cold. It can be found in many lozenges, cough syrups, and vapor baths. Herbalists recommend the use of fresh leaves in teas and gargles to soothe sore throats and treat bronchitis and sinusitis.

## German Chamomile (Matricaria recutita)

Chamomile has been used traditionally to treat a range of conditions including chest colds and sore throats. It may reduce inflammation; there are few studies on people to test such uses. With that said, many people find chamomile tea quite soothing for a sore throat.

#### Goldenrod (Solidago virgaurea)

Herbalists to treat sore throats and laryngitis have used goldenrod traditionally.

## Goldenseal (Hydrastis canadensis)

Many professional herbalists recommend goldenseal in herbal remedies for hay fever (also called allergic rhinitis), colds, and flu. It is also available in mouthwashes for sore throats and canker sores.

#### Licorice (Glycyrrhiza glabra)

Professional herbalists to relieve respiratory ailments, such as allergies, bronchitis, colds, and sore throats, have long used licorice. It can be used as a lozenge or tea. Do not take licorice if high blood pressure. Use of any licorice product is not recommended for longer than four to six weeks. People with obesity, diabetes, or kidney, heart, or liver conditions should also not use this herb nor should use it if you are pregnant, breastfeeding, have decreased libido or other sexual dysfunction.

#### Marshmallow (Althea officinalis)

Marshmallow—the herb, not the white puffy confection roasted over a campfire—has been used for centuries as both a food and a medicine. The mucilage, or gummy secretion, in the leaves and particularly in the root may be helpful for soothing sore throats.

## Peppermint (Mentha x piperita)

Peppermint and its main active agent, menthol, may feel soothing and calming for sore throat.

## Saw Palmetto (Serenoa repens/Sabal serrulata)

Early in the 20th century, saw palmetto was listed in the US Pharmacopoeia as an effective remedy for bronchitis and laryngitis, among other conditions The conditions for which slippery elm has received recognition from the U.S. Food and Drug Administration (FDA) as a safe and effective option include sore throat and respiratory symptoms, such as cough. Other herbs that may reduce cold symptoms including, possibly, sore throat include:

- Garlic (Allium sativum)
- Ginger (Zingiber officinale)

## Homeopathy

 Aconitum — for sore throats that come on suddenly after exposure to cold and are accompanied by a high fever and thirst; this remedy works

- best if given immediately after symptoms begin
- Apis mellifica— for shiny red, swollen throats with stinging, burning, and dry pains; this remedy is most appropriate for individuals who feel better with cold drinks but have little thirst; they may also have difficulty swallowing and may have the sensation of a fishbone being stuck in the throat; they also tend to be bothered by anything around the neck
- Arsenicum album— for a burning sensation in the throat accompanied by thirst, chills, and restlessness; symptoms are relieved by warm liquids; nasal discharge often occurs before the development of a sore throat
- Belladonna- this is usually the homeopathic remedy considered for sore throats, particularly if there is sudden onset of intense pain on the right side of throat along with redness, swelling, and feeling constriction; individuals also generally have a fever, experience pain when swallowing (although the individual wants to drink despite the pain), and often describe a hot sensation in the throat; this remedy works best if used during the first 24 hours of throat soreness
- Hepar sulphuricum— for stinging throat pain that is often described as a stick in the throat; throat pain is often accompanied by enlarged tonsils; pain may extend to the ears and is generally better from warm drinks; individuals for whom this remedy is appropriate are often very irritable and sensitive to cold, touch, motion, noise, and light
- Lachesis for throat pain with swelling that is initially worse on the left side but may spread to the right; symptoms are worsened by warmth, warm liquids, swallowing (including saliva), and constrictive clothing

- Lycopodium— for throat pain with a choking sensation, as if having a ball stuck in the throat; individuals for whom this remedy is appropriate often have pain that begins on the right side and may spread to the left; symptoms are relieved by warm drinks
- Mercurius— for throat pain accompanied by fever, weakness, red spots on the tonsils as well as possible pus, and bad breath; Mercurius is most appropriate for individuals who may be sensitive to both heat and cold and tend to salivate, drool, or perspire, particularly at night
- Phytolacca— for a dark red, purple, or bluish swollen throat accompanied by excessive aching, fever, and pain with swallowing; individuals for whom this remedy is appropriate may also have a shooting pain that extends to the ears, and an acute pain at the base of the tongue when protruded; these symptoms are worsened by warm drinks and motion

- Rhus toxicodendron— for throat pain accompanied by restlessness that is worse with initial swallowing, but is relieved by subsequent swallows as well as warm liquids; symptoms may be initiated by cold air or straining the voice
- Sulphur— for a burning, lingering sore throat; warm drinks and food worsen symptoms; tonsils tend to be swollen, breath may be foul, and gums and nasal passages are dry.

## Other Considerations Prognosis and Complications

Strep throat requires antibiotics to prevent its potential complications, which include:

- Scarlet fever, which can cause fever and a particular type of rash
- Rheumatic fever, which can cause joint inflammation or damage your heart valves
- Glomerulonephritis
- Infection in the blood stream
- Shock

Other potential complications of pharyngitis include an abscess, which needs to be removed or drained surgically.

## 123. Photodermatitis; Skin Disorders; Sunburn

Photodermatitis is an abnormal skin response ultraviolet (UV) to particularly sunlight. It can be acute or chronic. UV rays are classified wavelength and the greater the wavelength, greater the risk of developing photodermatitis. UVB rays range from 290 to 320 nm and may cause sunburn, tanning, aging, or cancer causing changes to the skin. UVA rays range from 320 to 400 nm and may cause reactions to light even through window glass. Ninety percent of the UV radiation from sunlight comes from UVA rays, 10% from UVB. Photoreactions from UV rays depend upon the amount of light reaching the earth. The season or time of year, latitude, thickness of the ozone layer, and topography influences this.

#### Signs and Symptoms

Itchy bumps, blisters, or raised areas

- Lesions that resemble eczema
- Hyperpigmentation
- Outbreaks in areas of skin exposed to light
- Pain, redness, and swelling
- · Chills, headache, fever, and nausea
- Less severe symptoms after repeated exposure

### What Causes It?

Certain chemical agents and drugs may predispose an individual to sunburn, an eczema-like reaction, or hives in reaction to UV rays. The reaction may be related to an allergy or it may be a direct toxic effect from the substance. Below are examples of agents or circumstances that may trigger one or the other type of reaction:

## Direct toxic effect:

 Tetracycline and sulfonamides, medications used for bacterial infections

- Griseofulvin, used for fungal infections
- Coal tar derivatives and psoralens, such as methoxsalen and trioxsalen, used for psoriasis
- Tretinoin and other medications containing retinoic acid used for acne
- Nonsteroidal anti-inflammatory drugs (NSAIDs), such as piroxicam
- Chemotherapy agents used to treat cancer, such as 5-fluorouracil and vinblastine
- Sulfonylureas, such as glyburide and glipizide, oral medications used for diabetes
- Quinine and other medications used to treat malaria
- Thiazide diuretics, such as hydrochlorothiazide
- Desipramine and other medications used for depression (known as tricylics)
- Phenothiazines, a class of medications used for psychosis
- Benzodiazepines, such as alprazolam and tetrazepam, medications used for anxiety disorders

#### Allergic reactions:

- Fragrances containing, for example, musk ambrette and methylcoumarin
- Sunscreens with *p*-aminobenzoic acid (PABA) esters
- Industrial cleaners that contain salicylanilide

## Who's Most At Risk?

- Skin type may influence the likelihood of a photodermatitis reaction.
- Exposure to UV rays for 30 minutes to several hours increases risk of photodermatitis (outbreaks in spring and summer months are common)
- Exposure to UV rays from 11 a.m. to 2 p.m. also increases risk of photodermatitis since 50% of UV radiation is emitted during this time.

## What to be done

A physical exam and a detailed history of exposure to sensitizers and UV rays are important for diagnosis. A review of all body systems, including blood and urine tests, helps detect any related disease.

Allergy tests may help identify substances that trigger or worsen the condition.

#### **Treatment Options**

#### Prevention

These measures may help prevent photodermatitis:

- Limit skin exposure to sun, especially intense midday sun.
- Use sunscreens that protect against UVA and have a sun protection factor (SPF) of 30 to 50.
- Cover up with a long-sleeved shirt, long pants, and a wide-brimmed hat.
- Beware of using any product that causes sun sensitivity.

#### Treatment Plan

For blisters or weepy eruptions, apply cool, wet dressings. With certain types of photodermatitis, doctors may actually use phototherapy to desensitize the skin or to help control symptoms.

#### **Drug Therapies**

For extremely sensitive patients, doctors may prescribe azathioprine to suppress the immune system. Short-term use of glucocorticoids may help control eruptions. For those who cannot be treated with phototherapy, doctors may prescribe hydroxychloroquine, thalidomide, betacarotene, or nicotinamide

## Complementary and Alternative Therapies Nutrition

Particular nutritional deficiencies can contribute to photosensitivity. Pellagra, for example, is caused by a niacin deficiency. Antioxidant nutrients, including betacarotene, may help lessen the severity of photodermatitis.

- and Beta-carotene Other Carotenoids: Despite the fact that beta-carotene is considered part of treatment standard photodermatitis, the results of studies regarding this supplement have been mixed. Healthy subjects received either carotenoids alone, mainly from beta-carotene, carotenoids plus vitamin E. Vitamin E did not appear to add to the benefits of the carotenoids alone.
- Fish Oil/Omega-3 Fatty Acids: Patients with a particular type of photodermatitis received

supplements of fish oil, which contains omega-3 fatty acids, for months. Tests afterward showed that the patients were significantly less sensitive to UV rays. Similarly, case reports of three children with hydroa vacciniforme, photosensitivity rare scarring omega-3 that disorder. found supplements lessened symptoms for three children. of the patients Photosensitive consider eating a diet rich in omega-3 fatty acids, such as from cold water fish.

- Protein: Actinic prurigo, a form of photosensitivity marked by ongoing outbreaks of itchy bumps during hot weather, is seen mainly in malnourished individuals. Research suggests that the condition is related to a diet deficient in protein or a specific amino acid. Patients with a high-protein diet have improved but tend to relapse a few weeks after returning to their standard diet.
- Vitamin B<sub>3</sub>: Nicotinamide (a form of niacin, or vitamin B<sub>3</sub>) may make a photosensitive reaction less likely.
- Vitamins C and E: Antioxidants, including vitamins C and E, help remove free radicals, harmful by-products that result from cells' use and generation of energy. Free radicals are linked to skin damage. Oral supplements of vitamins C and E seem to work together to possibly reduce UV-induced skin reactions.
- Vitamin D: In animal studies, vitamin D helped trigger the effects of an antioxidant protein found in skin cells of rats. This protein helps to protect against damage from UVB rays. It is not clear yet whether vitamin D supplements may help protect humans in the same way.

#### Herbs

• Green Tea: The antioxidant properties in green tea (Camellia sinensis) may provide protection against reddening of the skin caused by UV light. Epigallocatechin-3-gallate (EGCG), an active

of green component tea photoprotection demonstrated animal studies. In a human study, tests on skin samples showed that does not block EGCG absorption of UVB light but it does appear to inhibit redness, some cell and other damage, changes normally associated with UVB rays.

• Calendula: Although not studied scientifically, this herb has been used clinically for skin conditions including sunburn. It may also be used as a homeopathic remedy at doses consistent with that kind of therapy.

Similar to photosensitizing medications, certain herbs can trigger photodermatitis; such herbs include St. John's wort (Hypericum perforatum), angelica seed or root (Angelica archangelica), celery stems (Apium graveolens), rue (Rutae folium), and lime oil/peel (Citrus aurantifolia).

#### Homeopathy

While scientific studies of homeopathy specifically addressing photodermatitis have not been conducted to date, individual reports suggest that homeopathic remedies may be a useful adjunct for the prevention and treatment of photodermatitis.

## Prognosis/Possible Complications

Most photosensitivity reactions go away own and cause no permanent harm. However, symptoms can be severe when associated with a systemic disorder or when the exposure has been severe. Some photosensitivity reactions can continue for years after exposure ends. Complications may include:

- Ongoing photosensitivity, resulting in chronic photodermatitis
- Hyperpigmentation or dark discoloration compared to normal skin tone even after inflammation has resolved
- Premature aging of the skin
- Squamous cell or basal cell skin cancer or melanoma

## Follow up

Patients treat who need steroids to photosensitivity be reactions must monitored closely. In addition, anyone with history OI of photodermatitis photoreactivity should keep track of the

## 124.Post-Traumatic Stress Disorder (PTSD)

Post-traumatic stress disorder (PTSD) is a psychological condition that develops following an extremely stressful event or series of events that cause intense fear, particularly if feelings of helplessness accompany the experience. Those with PTSD are much more likely than others to have major depression, problems with substance abuse, or panic disorder sometime in their life, either before or after the development of PTSD. PTSD may be precipitated by war-related trauma, physical or sexual assault or abuse, an accident (such as an airplane crash or a serious motor vehicle accident), or a mass disaster like Tsunami. In PTSD, factors associated with the original event elicit the same stressful feelings later on, so the affected person often tries to avoid these stimuli. Feelings of stress in response to a trauma are normal; PTSD is characterized by the intensity of the feelings, how long they last, how one behaves in response to these feelings, and the presence of particular symptoms.

Signs and Symptoms

Symptoms of PTSD may develop months or even years after the original trauma and may include the following:

- Intrusive thoughts recalling the traumatic event
  - Nightmares
  - Flashbacks
- Efforts to avoid anything that either reminds the person of the traumatic event or that triggers similar feelings
- Flattened emotional response
- Lack of motivation
  - Depression
  - Feelings of guilt
  - Being easily startled
  - Irritability
  - Poor concentration
  - Hypervigilance (excessive awareness of possible danger)
  - Insomnia

## What Causes It?

Normally, during a traumatic event, one's perceptions and thought processes change

and serve to dissociate one from the extreme circumstance. This natural defense mechanism helps a person cope with the situation at hand and to separate from the trauma as a form of self-protection. With PTSD, these thought processes linger on and recur in response to any trigger that brings back thoughts of the trauma. This may be related to persistent elevations of a substance called glutamate in the brains of those with PTSD; glutamate generally rises in response to stress and returns to normal following the event. Ongoing trauma makes the persistence of dissociative thinking more likely as well.

#### Who's Most At Risk?

These factors increase the risk for PTSD:

- An environment where trauma is likely, such as fighting in a battle, living in a high-crime area, or being in a physically or sexually abusive relationship
- Working in a high-risk occupation, such as fire-fighting or law enforcement
- Having a psychological diagnosis, such as depression, before being exposed to a traumatic event
  - Not having adequate social support
- Women are twice as likely as men to show signs of PTSD.

#### What to be done

There are no laboratory tests to detect PTSD. To diagnose PTSD, a physician will consider your symptoms together with any history of trauma. He or she will likely also use psychological assessment tools to confirm the diagnosis and involve a psychologist or psychiatrist to participate in the evaluation and treatment.

### **Treatment Options**

#### Prevention

Early crisis intervention immediately after a traumatic event in the form of support groups, psychotherapy, and use of psychiatric drugs may help prevent PTSD. In addition, cultural or religious rituals such as prayer or healing ceremonies may be

helpful in relieving stress and other effects of the trauma.

#### **Treatment Plan**

The treatment for PTSD includes the following:

- Behavior therapy—through specific processes that involve mental imagery of the traumatic event paired with relaxation techniques, one learns to no longer experience fear in response to triggers
  - Cognitive therapy—coping skills are learned that change the thought process about the traumatic event
  - Psychodynamic therapy—by reexperiencing the traumatic event in
    a supportive environment, one gains
    insight into the conscious and
    unconscious meaning of the
    reaction to the event and learns to
    come to terms with the occurrence
    of the trauma, adapting one's beliefs
    about the self and the world.
  - Medication may be considered as well.

#### **Drug Therapies**

Physicians may prescribe antidepressants such as selective serotonin re-uptake inhibitors (SSRIs, such as sertraline, fluoxetine, fluoxamine, or paroxetine) or monoamine oxidase inhibitors (MAOIs, such as phenelzine) for symptoms of PTSD. Medications for anxiety may be helpful as well.

## Complementary and Alternative Therapies

Conventional psychotherapy with behavioral, cognitive, and psychodynamic components is the main treatment for PTSD. However, a number of mind/body techniques as well as other approaches have shown some promise as possible adjunctive treatments for this disorder.

 Eye Movement Desensitization and Reprocessing (EMDR), which requires one to make several sets of side-to-side eye movements while recalling a traumatic incident, seems to help reduce distress for many with PTSD. It is uncertain, however, whether this technique offers anything equivalent to or better than standard treatment alone. Nor is it entirely clear how long the

- reduction of PTSD symptoms lasts using EMDR.
- Biofeedback involves learning to sense bodily functions that are normally unconscious and occur involuntarily (for example, heart rate and temperature) in order to try to control these responses in times of stress. Some studies suggest that biofeedback, among other forms of relaxation training, may be an effective treatment for certain individuals with PTSD.
- Hypnosis has long been used to treat war-related post-traumatic conditions. More recently it has been used in cases of sexual assault (including rape), anesthesia failure, Holocaust survival, and car accidents. Hypnosis induces a deep state of relaxation, which may help patients with PTSD feel more safe and less anxious, decrease intrusive thoughts, and become reenrolled in daily activities.

#### Nutrition

 Inositol, considered to be part of the vitamin B complex and found in citrus fruits, vegetables, cereal grains, meats, and supplement form, may help reduce anxiety associated with PTSD.

Although there have not yet been any studies specifically investigating the following, these general nutritional guidelines may be helpful for those with PTSD:

- Avoid stimulants, such as caffeine from chocolate, coffee, black tea, and cola.
- Avoid depressants, such as alcohol.
- Maintain balanced blood sugar to help stabilize mood. For example, eat small, frequent meals that each includes a small amount of protein. Avoid processed, refined, and simple sugars.
- Eat whole grains, fresh fruits and vegetables, and protein from vegetables (legumes and nuts, for example) and fish.

#### Herbs

Kava kava (Piper methysticum)
 studies suggest that this herb

reduces stress-related anxiety and is an effective and safe alternative to anti-anxiety medications without undesirable side effects; although not studied specifically for PTSD, the general effects of kava kava may be of value in this setting.

The following herbs may help relieve restlessness, nervousness, and anxiety that can be associated with PTSD:

- Passionflower herb (Passiflora incarnata)
- Valerian root (*Valeriana officinalis*)
  Homeopathy
  - Aconitum for recurring panic following a traumatic experience; this remedy is most appropriate for individuals who have heart palpitations and shortness of breath which produce a tremendous fear of death
  - Arnica for chronic conditions (such as depression) that occur after a traumatic experience; this remedy is most appropriate for individuals who generally deny that anything is wrong
  - Staphysagria for individuals who feel fearful, powerless, or unable to speak up or defend themselves

 Stramonium — for anxiety disorders that occur after a shock or traumatic experience involving violence; the individual for whom this remedy is most appropriate tends to be generally fearful and have night terrors

#### Acupuncture

Acupuncture is typically used to help release endorphins and may help with insomnia, anxiety, and depression, each of which can accompany PTSD. Guided imagery has been shown to regulate the release of nervous system chemicals, including endorphins, which are thought to be healing. In one case involving a Vietnam War veteran, acupuncture and relaxation with guided imagery reportedly reduced insomnia, nightmares, and panic attacks over a treatment period of 12 weeks.

#### Prognosis/Possible Complications

If PTSD symptoms continue for longer than three months, the condition is considered to be chronic. Chronic PTSD may become less severe even if it is not treated. However, it may become severely disabling, interfering with many areas of life and causing physical complaints.

## 125.Premenstrual Syndrome (PMS)

Women who have premenstrual syndrome (PMS) experience a variety of physical and emotional symptoms that occur each month from 2 to 14 days before their menstrual cycle. The symptoms usually disappear once the cycle begins. PMS may begin at any age and ends after menopause. Approximately 75 percent of women experience PMS to some degree, with 20 to 50 percent finding that symptoms disrupt their daily activities, and 3 to 5 percent becoming incapacitated.

Signs and Symptoms

The following signs and symptoms often accompany PMS.

- Abnormal bloating and weight gain
- Breast swelling, tenderness
- Mood swings
- Depression and anxiety
- Skin disorders
- Changes in appetite, food cravings

- Changes in interest in sex
- Headaches, backaches, cramps
  - Inability to concentrate, loss of interest in usual activities, confusion

#### What Causes It?

While the exact cause of PMS is unknown, the most popular theories include hormonal changes (estrogen excess or progesterone deficiency), hypoglycemia (low blood sugar), vitamin B<sub>6</sub> deficiency, and abnormal metabolism of prostaglandin, excessive fluid retention and endorphin withdrawal.

#### Who's Most At Risk?

Women with a history of the following conditions are at a higher-than-average risk for having PMS.

Dysmenorrhea (painful menstruation)

- Depressive, mood, anxiety, or bipolar disorders (family history, too)
  - Postpartum depression or psychotic episodes
  - High stress

#### What to be done

You'll need to chart symptoms and their severity daily for one to two months. Take a detailed history of symptoms, do a physical and gynecologic examination to rule out other medical conditions, and conduct a psychosocial evaluation. Certain laboratory and imaging studies may be used, such as a Pap smear, complete blood count, chemistry screen, fasting blood glucose test, and thyroid studies.

## **Treatment Options**

#### Prevention

Reducing stress, increasing exercise, and making dietary changes around the time of menstruation can prevent PMS symptoms from worsening.

#### **Treatment Plan**

Preventive measures and drug therapy are most often used for treating PMS.

#### **Drug Therapies**

- Diuretics, for bloating and water retention
- Analgesics, for headaches and cramps
- Beta-blockers and calcium-channel blockers, to prevent the onset of migraine headaches
- Prostaglandin inhibitors for painful menstruation
- Spironolactone for skin conditions
- Medications that block ovulation
- Bromocriptine for breast soreness
- Anti-anxiety medications
  - Antidepressants
  - Progesterone, for relief of symptoms

Women who are planning to become pregnant should avoid medications such as prostaglandin inhibitors, diuretics, spironolactone, and danazol.

## Surgical and Other Procedures

Women whose symptoms are severe and do not respond to treatment may need to undergo a hysterectomy, including removal of the ovaries, followed by estrogen replacement therapy.

# Complementary and Alternative Therapies Nutrition

Decreasing or avoiding caffeine (including chocolate), saturated fats, sugar, salt, dairy, meat, poultry, and alcohol can help reduce the intensity and duration of symptoms. Nutritional deficiencies may be addressed with these supplements.

- Vitamin B<sub>6</sub> (100 to 200 mg a day) with B-complex (50 to 100 mg a day)
- Magnesium (400 mg a day)
- Vitamin E (400 to 600 IU a day), especially with breast tenderness
- Essential fatty acids: omega-3 and omega-6 (3,000 to 4,000 mg a day for three months, then decrease dose by 1,000 mg every two months)
- Chromium (250 mcg one to two times per day) to reduce sugar cravings

#### Herbs

Herbal remedies may be helpful in alleviating symptoms. The following herbs should be used in combination, either as tincture (60 drops three times a day or tea (1 cup three to four times a day):

- Chaste tree (Vitex agnus castus) (175 mg a day)
- Black cohosh (Cimicifuga racemosa) (100 to 600 mg a day)
- Valerian (Valeriana officinalis) (150 to 300 mg one to four times a day, or before bed for insomnia) or kava kava (Piper methysticum) (200 mg one to four times a day, or before bed). Reduce dose of either herb if drowsiness occurs.
- Milk thistle (Silybum marianum) (200 to 600 mg a day)
- Dandelion (*Taraxacum officinale*) root and/or leaves as a tea or tincture can be used as a diuretic. If you have liver problems, consult with an experienced practitioner before using dandelion.
- St. John's wort (Hypericum perforatum) (300 mg two to three times per day) for depression associated with PMS. Must be taken consistently throughout the month; direct sun exposure may cause rashes in some people.

For PMS, teas or tinctures are preferred. **Homeopathy** 

- Chamomilla for intense menstrual pain; this remedy is most appropriate for individuals who are extremely irritable, angry, and have frequent mood swings
- Cimicifuga for feelings of hysteria, frustration, and being overwhelmed; this remedy is most appropriate for individuals who have labor-type pains that migrate from one side of the body to the other and may involve the back or even sciatic nerve.
- Colocynthis for cramps that are relieved by bending forward, abdominal massage, and warmth (such as a heating pad); this remedy is most appropriate for individuals who are extremely irritable and restless
- Ignatia for emotional symptoms such as grief, panic, and mood swings; this remedy is most appropriate for individuals who feel particularly vulnerable
- Lachesis for individuals who tend to be annoyed, caustic, talkative, and envious and whose pain and bloating is worse on the left side; symptoms tend to worsen upon awakening in the morning and with exposure to heat or light pressure; symptoms improve dramatically when menstruation begins
- Lycopodium for bloating with backaches and gas that are the worst during early evening and in warm weather
- Magnesia phos for sharp cramps that are relieved by bending forward, abdominal massage, and warmth (such as a heating pad), but are worsened by cold air

- Nux vomica for individuals who are extremely irritable, confrontational, and feel nauseous
- Pulsatilla for irregular periods with cramps, bloating, and/or mood swings as the predominant symptoms; an appropriate candidate for Pulsatilla is gentle and yielding but clingy and cries easily; may have nausea and water retention that is aggravated by heat
- Sepia for bloating, mood swings, constipation, drowsiness, and irritability

#### Acupuncture

Although scientific evidence regarding the use of acupuncture for PMS is lacking, acupuncturists frequently treat this condition. Acupuncturists treat people with PMS based on an individualized assessment of the excesses and deficiencies of qi located in various meridians like the liver and/or spleen meridians.

#### Chiropractic

Some studies suggest that chiropractic spinal manipulation may be effective for women with PMS. Women with PMS have been found to have a higher rate of spine-related problems (such as tenderness and muscle weakness) than those who do not have PMS. The researchers note that these effects may be short-lived and that monthly chiropractic treatment would probably be needed to maintain these positive results.

## **Prognosis/Possible Complications**

Severe PMS can disrupt a woman's life. Psychological and emotional support as well as treatment of the physical symptoms may help.

#### Follow up

Ongoing follow-up and regular evaluations are necessary.

## 126.Proctitis; Rectal Inflammation

Proctitis is an inflammation of the lining of the rectum causing pain, soreness, bleeding, and a discharge of mucus or pus. Proctitis can last a long or a short amount of

time. When the inflammation extends beyond the rectum, the condition is often referred to as proctocolitis. At times, it is necessary to treat proctitis the same way as inflammatory bowel disease – a related disorder characterized by an inflammation of the lining of other parts of the gastrointestinal tract.

#### Signs and Symptoms

Common symptoms of proctitis include:

- Anal or rectal pain and discomfort, such as itching
- · Urgent desire to defecate
- · Discharge of mucus, pus, or blood
- Change in bowel habits, such as constipation or diarrhea
- Rectal bleeding
- Fever

#### Causes

Proctitis has both infectious and noninfectious causes. Some infections that cause proctitis include:

- Campylobacter
- Entamoeba histolytica
- Salmonella

Other infections that cause proctitis may be sexually transmitted, such as:

- Herpes simplex
- Gonorrhea
- Chlamydia
- Syphilis
  - Shigellan

Trauma and radiation therapy for cancer of the pelvis or lower abdomen are examples of noninfectious causes of proctitis.

#### **Risk Factors**

The following are associated with a high risk of proctitis:

- Oral-anal intercourse, particularly with multiple partners
- Compromised immune system
  - Radiation therapy to the lower abdominal or pelvic region
- Use of antibiotic medication

Because some people with proctitis also develop inflammatory bowel disease, and related conditions such as Crohn's disease and ulcerative colitis, the risk factors in those instances of proctitis may be similar to the risk factors for inflammatory bowel disease.

#### **Preventive Care**

- Avoiding anal intercourse may prevent proctitis from being spread by sexual transmission.
- A reduction in caffeine, dairy foods, high-fat foods, and artificial

- sweeteners may lower the risk of proctitis. Studies suggest a link between ulcerative colitis and diets high in these foods.
- Stress-reduction techniques such as yoga, tai chi, and deep relaxation, may also lower the risk of proctitis. Stressful situations may induce an inflammation of the lining of the intestines, possibly leading to inflammatory bowel disease.

#### **Treatment Approach**

Proctitis is a condition that tends to respond very effectively to a combination of both conventional and complementary therapies. For example, a physician may prescribe antibiotics for proctitis caused by bacterial infection. If the inflammation is caused by Crohn's disease or ulcerative colitis, the physician may recommend corticosteroids or enemas containing non-steroidal anti-inflammatory medication. In addition to these conventional treatments, acupuncture, herbs, and nutritional supplements, such as omega-3 fatty acids and magnesium, may also provide relief from the symptoms of proctitis.

#### Medications

Antibiotic medication, prescribed by a physician, effectively treats proctitis caused by the following bacterial infections:

- Herpes simplex
- Gonorrhea
- Chlamydia

When the cause of proctitis is unknown, or when proctitis is caused by radiation therapy, the following drug therapies may be more effective:

- Corticosteroids, such as hydrocortisone cream, applied directly to the area
- Anti-inflammatory drugs, particularly those used to treat inflammatory bowel disease, administered orally or as a foam, enema, or suppository

## Surgery and Other Procedures

Some symptoms of proctitis, including dilation of the blood vessels on the surface of the inner lining of the rectum or colon, may be treated by a procedure called endoscopic cauterization. Most researchers agree, however, that more aggressive

surgery should only be considered when less invasive treatments have proved ineffective.

Nutrition and Dietary Supplements

Nutrition and dietary supplements that may reduce the symptoms of proctitis include the following:

### Omega-3 fatty acids

Diets high in omega-3 essential fatty acids, found in cold-water fish, reduce inflammation, abdominal pain, rectal bleeding, anorexia, general malaise, and fever associated with proctocolitis more effectively than placebo.

#### Magnesium

Researchers have found that patients with severe diarrhea caused by radiation therapy improve significantly faster when treated with intravenous magnesium sulfate than when treated with anti-diarrhea medication.

#### Glutamine

Glutamine, an amino acid found in various plant and animal products, may reduce inflammation of the intestinal lining caused by radiation therapy. Unfortunately, researchers have yet to determine whether glutamine is as effective in humans.

Lactobacillus acidophilus
Given that proctitis may develop after
taking antibiotic medication, researchers
theorize that Lactobacillus acidophilus, or
other probiotics (organisms that enhance the
life processes of other organisms) may help
prevent antibiotic-induced proctitis.
Herbs

- Cascara sagrada bark (Rhamnus purshiana) used to soften stool
- Marshmallow root (Althaea officinalis) used to reduce inflammation of the colon
- Flaxseed (Linum usitatissimum) soothes inflamed tissue
- Slippery elm (*Ulmus fulva*) soothes inflamed tissue
- Marigold (Calendula officinalis) and wild yam (Dioscorea villosa) – soothe inflamed tissue

# Homeopathy

 Gambogia – used to reduce inflammation of the colon and rectum as well as severe bouts of diarrhea; this herb is particularly useful for those who are extremely fatigued after loose bowel movements

- Natrum sulphuricum— used to reduce diarrhea, flatulence, and inflammation of the colon and rectum caused primarily by gonorrhea
- Sulphur used to reduce inflammation of the colon and rectum as well as the itching, burning sensation in the rectum caused by diarrhea

#### Acupuncture

One promising study of 44 patients with proctitis caused by radiation therapy found that acupuncture "cured" 73% of the patients, "markedly" relieved symptoms in 9% of the patients, and reduced symptoms to "moderate" in 18% of the patients. There were no patients whose symptoms worsened or remained the same following acupuncture treatment.

#### Mind/Body Medicine

Based on clinical experience, however, some psychiatrists report that inflammatory bowel diseases may be associated with anxiety, anger, aggression, obsession, and a tendency to keep emotions bottled up inside. For these reasons, some researchers suggest that psychotherapy combined with the following stress-reduction techniques may help relieve the symptoms of proctitis:

- Biofeedback
- Hypnotherapy

#### Ayurveda

Ayurvedic practitioners describe people with inflammation of the rectum or bowel as having a pitta or "fire" illness, which can be aggravated by Mars, the planet related to blood and to the liver. They recommend yoga postures, particularly "the fish," "the boat," and "the bow," to relieve symptoms of the condition. The traditional Ayurvedic herbal remedy called Boswellia serrata has also shown promise in a potential alternative treatment for ulcerative colitis. For this reason, some practitioners suggest that Boswellia serrata may be effective for the treatment of proctitis, although it has not been studied for this condition specifically.

#### Other Considerations

An individual with proctitis should keep the following considerations in mind:

### **Prognosis and Complications**

Complications from proctitis can range from the formation of ulcers and boils to severe bleeding. Proctitis related to ulcerative colitis may even evolve to include more widespread areas of the colon and other parts of the gastrointestinal tract. Mild forms of proctitis, which often resolve spontaneously or with the application of topical creams and foams, will not require long-term medication. People with more severe forms of proctitis, such as proctitis

caused by gonorrhea, are often less responsive to treatment with the failure rate being as high as 35% in some cases. In general, however, the prognosis for individuals with most forms of proctitis is good with proper treatment and follow-up with a physician.

### 127.Prostate Cancer; Cancer, Prostate

Prostate cancer is a malignant tumor that originates in the prostate gland and can eventually spread to other organs, bones, and tissues. The prostate is a cluster of small glands located beneath the bladder that surrounds the urethra, the tube that carries urine from the bladder out through the penis. Its principle function is to manufacture fluid that constitutes a portion of the semen. Prostate cancer is the most common cancer in men in the world and it is the second most common cause of cancer death in men over age 55. The incidence of prostate cancer increases dramatically with each decade after 50, and disease rates appear to vary by population. Fortunately, prostate cancer tends to be slow growing compared to many other cancers-the majority of prostate cancers either do not spread or cause harm for decades.

### Signs and Symptoms

Some symptoms that may indicate prostate cancer include:

- Difficult and painful urination
- Frequent urination and a feeling that one has to urinate even when the bladder is empty
- Incomplete emptying of the bladder, which may lead to dribbling of urine
- Awakening frequently in the night to urinate
- Decreased force of urine stream
- Blood in the urine
- Hip and back pain

When the cancer has spread to other parts of the body, symptoms can include:

- Bone pain
- Weakness or paralysis caused by compression of the spinal cord
- Weight loss

- Anemia
- Kidney failure

#### Causes

The causes of prostate cancer are unknown. but are thought to include environmental, nutritional, hormonal, and genetic factors. The influence of genes on the development of prostate cancer is suggested by the fact that prostate cancer tends to occur in men who are related to one another; plus, a gene has been identified that is associated with 30% of family-related prostate cancers. Reports also indicate that farmers as well as men who work in tire, rubber, and sheet metal factories tend to have high rates of prostate cancer or more aggressive forms of the cancer. Some researchers speculate that environmental exposure to cadmium (present in commercial fungicides) and harmful substances may responsible for the high rates of prostate cancer in these men. Nutrition has been implicated in the development of prostate cancer because disease rates among men from countries with low prostate cancer rates (such as Japan) increase when they immigrate to the United States; this rise in incidence is thought to be due to the switch to a typical American diet, which is high in saturated fat. Elevated levels of male sex hormones, such as testosterone, may also play a role in the development of prostate cancer.

### **Risk Factors**

- Older age-prostate cancer is most common among men who are older than 55
- Race-African Americans have a greater risk of developing prostate cancer than European Americans who, in turn, have a greater risk

than Native and Hispanic Americans

- Family history of prostate cancer—having a brother with prostate cancer makes an individual 4.5 times more likely of developing the disease; having a father with prostate cancer makes an individual 2.3 times more likely of developing prostate cancer; having a sister or mother with ovarian or breast cancer is also considered a risk
- High-fat diet—foods rich in saturated fat may increase testosterone levels
- Lack of exercise may increase the risk in those who eat a high-fat diet
- Occupation—people who are regularly exposed to the chemicals dimethyl formamide and acrylonitrate, and the metal cadmium (such as metal workers and farmers) have high rates of prostate cancer

#### Diagnosis

Two standard tests are used for early detection of prostate cancer:

- Digital rectal exam (DRE)—in this test, the physician inserts a gloved, lubricated finger into the patient's rectum in order to feel the prostate for bumps or other abnormalities. Many malignant tumors originate in the outer part of the prostate where they may be detected by this exam. Some men find this embarrassing, but the DRE is quick and relatively painless, and helps detect 40% of all prostate cancers. Although as many as 40% of tumors identified using DRE have already spread outside of the prostate gland, studies indicate that regular DREs still save lives.
- PSA test—blood test measuring the level of prostate-specific antigen (PSA), a protein produced in the prostate gland that keeps semen in liquid form. Prostate cancer cells produce elevated quantities of PSA, so measuring PSA levels allows physicians to detect cancer while it is still microscopic. Unfortunately, the test is not accurate enough to

definitively rule out or confirm cancer. For example, advancing age and benign conditions such as enlarged prostate can also elevate PSA levels. In general, PSA tests help detect up to 75% of all tumors.

If either the DRE or PSA test suggests the possible presence of cancer, the following tests will be performed to make a definite diagnosis:

- Transrectal Ultrasound—a visual image of the prostate is obtained by using ultrasound
- Biopsy of the prostate—a tissue sample is obtained through the rectum and examined for cancerous cells under the microscope

If the biopsy confirms the presence of cancer, several tests will be performed to detect any spread of the disease. This information gauges how serious the prostate cancer is at the time of diagnosis. Likely tests include the following:

- Imaging tests (CT and MRI) computerized tomography (CT) or magnetic resonance imaging (MRI) scans may pinpoint the location of cancer that has spread beyond the prostate
- Bone scans and X rays—these look for spread of cancer to the bones
- Lymph node dissection—this is part of a surgical procedure to determine if the cancer has spread to the lymphatic system

#### **Preventive Care**

- Consuming a low-fat diet, rich in fruits and vegetables
- Eating foods rich in selenium (such as brewer's yeast, wheat germ, chicken liver, nuts and seeds, tuna, herring, and oysters) and vitamin E (such as wheat germ, organ meats, sweet potatoes, leafy vegetables including spinach, nuts and seeds, eggs, soybeans, and lima beans)
- Exercising regularly, because exercise temporarily lowers testosterone

#### **Treatment Approach**

Treatment for prostate cancer depends on the stage of the disease, the age of the individual, the presence of other medical conditions, and the individual's preferences

physician's with the in conjunction recommendations. If prostate cancer is detected early, treatment usually involves either surgical removal of the prostate or radiation therapy. For more advanced cases of prostate cancer, or if cancer spreads beyond the prostate, hormone medications is the preferred treatment. If the individual is older than 70 and has only a slow-growing tumor, the physician may adopt a strategy called "watchful waiting," in which the man returns frequently for check-ups treatment only occurs if his condition worsens. During the time of watchful waiting (and also as a possible adjunct to surgery, medication, or radiation), dietary modifications may slow the growth of the cancer. For example, eating a low-fat diet, rich in fruits, vegetables, soy, selenium, and fiber has been associated with a decreased risk of prostate cancer.

#### Medications

Medications are considered the best therapy for people with advanced stages of prostate cancer or when cancer spreads from the prostate to other parts of the body. Drugs may also be prescribed prior to radiation therapy or when surgical procedures fail to lower PSA levels. Most medications for prostate cancer lower levels of male sex hormones (such as testosterone). Lowering testosterone levels can cause tumors to shrink or slow their growth. Some commonly prescribed medications include:

- Luteinizing Hormone-Releasing Hormone (LH-RH) agonists (such as leuprolid, goserelin, buserelin)-LH-RH is natural hormone, released by the hypothalmus in the brain, that lowers the production testosterone; the medication encourages the release of this natural hormone. Side effects can include hot flashes, weight gain, development of male breast tissue, breast pain, and nausea.
- Hormones including antiandrogens (such as flutamide, bicalutamide, and nilutamide) and estrogens (such as diethylstilbestrol and ethinyl estradiol)—these medications reduce testosterone levels; side effects can include reduced sex

- drive, fatigue, nausea, impotence, diarrhea, and hot flashes
- Chemotherapeutic medications (such as vinblastine, mitoxantrone, and estramustine)—improve symptoms in advanced cancer but do not increase life expectancy
- Glucocorticoids—may be used along with chemotherapy to suppress production of male hormones

#### Surgery and Other Procedures

- Removal of the prostate (prostatectomy)—offers excellent cure for men with prostate cancer that is completely confined to the prostate, and is performed if life expectancy is at least 10 years and cancer is confined to the prostate. Side effects include incontinence and impotence, but new procedures that spare nerves near the prostate preserve sexual function in 25% to 90% of men.
- Surgical exploration of lymph nodes—may be performed to evaluate whether prostate cancer has spread to the lymphatic system
- Resection of the prostate (called TURP or transurethral resection of the prostate)—removal of all or part of the prostate gland to eliminate cancer and to relieve obstruction of urine
- Removal of the testes (orchiectomy)—lowers testosterone levels; side effects can include impotence and hot flashes

In addition to these surgical procedures, radiation therapy may be effective for cancer confined to the prostate, particularly for older men. Radiation can be administered through an external source, or irradiated seeds can be placed internally near the prostate. Using irradiated seeds actually lowers the risk of damage to organs surrounding the prostate from radiation because administration can be more precise in both amount and location. Side effects can include proctitis, urinary tract infections, and impotence.

### Nutrition and Dietary Supplements Low-fat Diet

population-based studies suggest that dietary fat may influence the risk of prostate cancer. In one study, men with prostate cancer, those who consumed the most saturated fat (from, for example, meat, dairy, and butter) in the previous year were significantly more likely to develop advanced prostate cancer. Diets particularly high in animal fats have also been linked to an increased risk of prostate cancer among While an association between high-fat diets and prostate cancer is not definitive, it is probably wise for people at risk for prostate cancer to avoid foods high in saturated fat and trans fatty acids (such as margarine).

#### Fruits and Vegetables

People who consume higher amounts of fruits and vegetables, especially cruciferous vegetables (such as broccoli, cauliflower and Brussels sprouts) may have a reduced risk of developing prostate cancer. Fructose, or fruit sugar, seems to stimulate the production of a certain form of vitamin D, which, in turn, has been associated with a decreased risk of advanced prostate cancer. As with vegetables, therefore, including fruit in the diet also appears to be safe and potentially beneficial.

### **Omega-3 Fatty Acids**

Omega-3 fatty acids (specifically, docosahexaenoic acid [DHA] and eicosapentaenoic acid [EPA]) may inhibit the growth of prostate cancer. Similarly, population based studies of groups of men suggest that a low-fat diet with the addition of omega-3 fatty acids from fish or fish oil help prevent the development of prostate cancer. A healthy balance of omega-3 to omega-6 fatty acids appears to be particularly important for reducing the risk of this condition. Alpha linolenic acid (ALA; another omega-3 fatty acid) may not offer the same benefits as EPA and DHA.

Lycopene

While some studies suggest that lycopene, the primary ingredient in tomatoes, may protect against prostate cancer. Lycopene is a carotenoid that acts as an antioxidant, protecting cells from damage that may become cancerous over a long period of time. In a large study, lycopene levels were significantly lower in those with prostate cancer compared to those without.

However, tomato consumption in another study did not reduce the risk of prostate cancer. Although levels of this carotenoid in the blood may be lower in those with prostate cancer, eating more tomatoes in order to raise lycopene levels may not make a difference in the risk of development or treatment of prostate cancer. Like other vegetables, however, it seems safe and reasonable to include tomatoes in the diet.

#### Soy

People who live in cultures in which soy is a large part of the diet are at less risk for developing hormone-related cancers, such as prostate cancer. For example, men living in Japan have a significantly lower risk of developing prostate cancer than men in the United States—notably, the Asian diet contains significantly more soy than the typical American diet. Laboratory and animal studies also suggest that genistein, a plant based hormone (phytoestrogen), which comes from soy, may suppress the growth of prostate cancer cells. Such studies are promising, but the role of soy in preventing or treating prostate cancer in people remains unclear.

#### Selenium

Several studies indicate that selenium, an antioxidant, may protect against prostate cancer. Men who received selenium were significantly less likely to develop prostate cancer. Laboratory studies also suggest that selenium may suppress the growth of prostate cancer cells. Selenium supplementation may be worth considering as part of a regimen to treat or prevent progression of prostate cancer.

#### **Beta-Carotene**

Beta-carotene is an antioxidant that occurs naturally in the body. In a well-respected long-term study, supplementing with beta-carotene appeared to reduce the risk of developing prostate cancer by 32% in men who had low levels at the beginning of the study.

#### Vitamin E

Gamma-tocopherol may significantly decrease the risk of prostate cancer. Researchers measured levels of gamma tocopherol, selenium, and alpha-tocopherol (another form of vitamin E), in the blood and toenails of 117 men with prostate cancer and 233 healthy men. Men with the highest levels of gamma tocopherol were

significantly less likely to develop prostate cancer compared to those with the lowest levels.

#### Vitamin D

A certain form of vitamin D, known as 1, 25-dihydroxy vitamin D, inhibits growth of prostate cancer cells. What this means for people with or at high risk for prostate cancer is unclear. Some experts suggest eating several servings of fruit daily, which helps stimulate production of this form of vitamin D, and avoiding dairy, which may inhibit production of this type of vitamin D. Fiber

In one 4-month, randomized, controlled trial studying men with high cholesterol, researchers happened to note that PSA levels were lowered after the men consumed meals high in soluble fiber (such as barley, peas, beans, oat bran, and cereal with psyllium) but not with meals rich in insoluble fiber (such as wheat bran cereal as well as high-fiber crackers and bread). However, these findings do not necessarily indicate that a diet high in fiber will lower PSA readings, or guarantee a decreased risk for prostate cancer.

#### Melatonin

Studies suggest that melatonin levels are lower in people with prostate cancer than those without cancer. In addition, men with prostate cancer also tend to have lower than normal nighttime levels of this hormone. In one study, melatonin improved survival rates in 9 out of 14 patients with metastatic prostate cancer. Laboratory studies have also found that melatonin inhibits the growth of prostate cancer cells in test tubes. Interestingly, meditation is thought to be a valuable addition to the treatment of prostate cancer as it has been shown to increase levels of melatonin in the body.

#### Quercetin

Preliminary laboratory studies suggest that the flavonoid quercetin inhibits prostate cancer cells in test tubes. How this will ultimately translate to prevention or treatment of prostate cancer in men is unknown at this time.

#### Herbs

### Red Clover (Trifolium pratense)

In one report, a 66-year-old man who took red clover every day for a week prior to having a prostatectomy for prostate cancer showed reduced signs of cancer in the

diseased prostate tissue. Plant estrogens (phytoestrogens) in the red clover may have responsible for the observed improvement. It may be worthwhile to test this theory in a large number of people with prostate cancer over an extended period of time.

### St. John's wort (Hypericum perforatum) and kava kava (Piper methysticum)

At least 25% of people with advanced prostate cancer are depressed, and many are anxious. Some experts recommend St. John's wort to help alleviate depression or kava kava to soothe anxiety. Use of these herbs should be discussed with physician, who can also describe the potential for interactions between the herbs prescription medications. For example, St. John's wort should not be taken with other antidepressants or with a class of drugs called protease inhibitors (used for HIV).

### Ginkgo (Ginkgo biloba)

While ginkgo has become a popular remedy for men who are unable to have an erection (a side effect of many prostate cancer treatments), the herb has not specifically studied for this use in men with prostate cancer.

### Acupuncture

Acupuncture may provide relief from side effects of orchiectomy (removal of the testes). Studies also support the use of acupuncture for the pain that often occurs when cancer has spread beyond the prostate (particularly to the bones). While acupuncture is not used as a treatment for cancer itself, evidence suggests it can be a valuable therapy for cancer-related symptoms. Acupressure has also proved useful in controlling breathlessness; this is a technique that patients can learn and then use to treat them.

# Massage and Physical Therapy

Studies suggest that massage reduces stress and boosts immune function, so it may help relieve anxiety undergoing for men treatment for prostate cancer. Pelvic floor exercises—the repetitive use of muscles that start and stop the flow of urine-may help decrease incontinence caused prostatectomy. This therapeutic approach is often combined with biofeedback.

## Mind/Body Medicine Meditation

Meditation may benefit men with prostate cancer by helping them to reduce stress, ease anxiety, and regain a sense of self-

Biofeedback and Pelvic Muscle Training

Several studies have found that learning to start and stop the flow of urine by repeatedly using the muscles of the pelvis (PMT) in combination with biofeedback can reduce the duration of incontinence after prostate cancer surgery. PMT alone, with or without biofeedback, is responsible for the beneficial effects. Either way, both PMT and biofeedback are safe, noninvasive therapies that may benefit men who suffer from incontinence following either surgical removal of the prostate or other treatments for prostate cancer.

#### **Traditional Chinese Medicine** PC-SPES

Several studies suggest that the traditional Chinese herbal mixture, PC-SPES, appears to be a promising treatment for prostate cancer. As suggested by a recent study of 67 men with prostate cancer at the Memorial Sloan-Kettering Cancer Center, PC-SPES, a containing combination formula following herbs may reduce PSA levels in men with prostate cancer:

- Chrysanthemum (Dendrantherma morifolium)
- Reishi mushroom (Ganoderma lucidium)
- Licorice (Glycyrrhiza glabra)
- Da Qing Ye (Isatis indigotica)
- San-qi ginseng (Panax pseudoginseng, Wall)
- Chinese skullcap (Sculletaria baicalensis, Georgi)
- Saw palmetto berry (Serenoa repens)

While these results are promising, further studies are needed to determine whether PC-SPES is safe and effective for men with prostate cancer. In fact, a well-designed long-term study is currently underway by researchers at the University of California, Francisco in collaboration scientists at the Dana Farber Cancer Institute in Boston. Research regarding possible use of PC-SPES is of particular interest for men who do not respond to surgery, radiation, or medication. Commonly reported side effects of PC-SPES include loss of libido, impotence, leg cramps, diarrhea, and hot flashes. More serious side effects have included blood clots, allergic reactions, and heart and kidney failure.

### Other Considerations Prognosis and Complications

Most complications from prostate cancer result from specific treatments. These include:

- Prostatectomy—can cause incontinence and/or impotence
- therapy—can Radiation cause proctitis, bladder infections, and/or impotence
- Hormone medications—can cause loss of libido, impotence, flashes, excessive development of male breasts, and tenderness in male breast tissue
- testes-can Removal of cause impotence and hot flashes

The outlook for a man with prostate cancer depends on his age, the stage of tumor growth, whether he has any underlying medical illnesses, and his PSA levels. The prognosis for men with cancer that has not spread beyond the prostate is quite good. Most of these cancers are curable with appropriate treatment, and after 15 years the same number of these men will be alive as those who never had prostate cancer. If the cancer spreads beyond the prostate and does not respond to hormone medications, however, there is little hope for a cure. Still, prostate tumors are slow growing, and even men with advanced prostate cancer can survive for 5 years or more.

# 128.Prostatitis; Prostate Infection

Bacteria usually cause prostatitis, or prostate infection, but a nonbacterial form of the disease also exists. Prostatitis is the most common genitourinary ailment in men younger than age 50, but the bacterial form occurs most often in men age 70 and older. If left untreated, infection can spread to the testicles and epididymis and, in severe cases, destroy the prostate gland.

#### Signs and Symptoms

- · Recurrent urinary tract infections (UTIs)
- Frequent and urgent urination
- Difficult or painful urination
- Urinating at night
- Fever; chills
- Generalized sense of ill health
- Painful ejaculation
- Bloody semen
- Sexual dysfunction
- Pain in the lower back, pelvis, or perineum (lining of the pelvic area)

#### What Causes It?

- Recent urinary tract infection
- Prior sexually transmitted diseases, such as gonorrhea or chlamydia
- Smoking
- Excess alcohol consumption

#### What to be done

Do a physical examination of the prostate and use laboratory tests, such as urinalysis or blood cultures.

### **Treatment Options**

### **Drug Therapies**

Several antibiotics and other drugs are used to treat prostatitis. They are usually given orally, except in cases of sudden and severe prostatitis, which may require intravenous administration. The treatments may last 4 to 12 weeks, depending on how severe the infection is. Stool softeners, inflammatory agents, and hot sitz baths may also relieve symptoms.

### **Surgical Procedures**

If fever and pain persist, may need surgery. Complementary and Alternative

### **Therapies Nutrition**

Vitamin C (250 to 500 mg two times a day)

- Zinc (60 mg a day) has been shown to reduce the size of the prostate.
- Selenium (200 mcg a day) is an antioxidant concentrated in
- Essential fatty acids (1,000 to 1,500 mg one to two times a day) are anti-

- inflammatory for optimum prostaglandin concentrations,
- Pumpkin seeds have been used historically for a healthy prostate.
- simple sugars, alcohol (especially beer), and coffee; drink plenty of water (48 oz. a day),

#### Herbs

Studies show saw palmetto (Serenoa repens) may be as effective as Proscar. Dose of 160 mg twice a day is difficult to achieve in tea or tincture; extract standardized for 85 to 95 percent of fatty acids and sterols is recommended. Cernilton, a flower pollen extract (500 to 1,000 mg two to three times a day), has been used extensively in Europe to treat prostatitis caused by inflammation or infection. It also has a contractile effect on the bladder and relaxes the urethra.

- Uva ursi (Arctostaphylos uva ursi): diuretic, urinary antiseptic
- Goldenseal (Hydrastis canadensis): diuretic, antiseptic, antimicrobial
- Coneflower (Echinacea purpurea): improves immune function
- Corn silk (Zea mays): diuretic, soothing demulcent

Take a combination of the above herbs (1 cup tea or 60 drops tincture) three times a day.

### Homeopathy

- Chimaphila umbellata for retention of urine with an enlarged prostate
- Pulsatilla for pain after urination, especially involuntary urination
- Pareira for painful urination, especially with painful urging
- Lycopodium for painful urination with reddish sediment in the urine, especially with impotence
- Thuja specifically if there is a forked stream of urine

### **Physical Medicine**

Kegel exercises increase pelvic circulation and improve muscle tone.

Contrast sitz baths: Need two basins that can comfortably sit in. Fill one basin with hot water, one with cold water. Sit in hot water for three minutes, then in cold water for one minute. Repeat this three times to complete one set. Do one to two sets a day, three to four days a week.

Acupuncture

May improve urinary flow and decrease swelling and inflammation.

Massage

May help reduce symptoms. Focus may be on the lower abdominal area, lower back, and around the sacrum.

Follow up

Be sure following instructions for treatment and keep using the treatment as directed even if you start to feel better.

Special Considerations

should have a yearly prostate examination after age 40, even if they have no symptoms of prostate problems. In recurring cases, may need ongoing treatment with periodic checkups.

## 129.Pulmonary Edema

Pulmonary edema occurs when too much fluid accumulates in the lungs, often due to heart attacks, heart disease, or acute severe asthma. It requires immediate medical attention.

Signs and Symptoms

Symptoms often begin suddenly and get worse quickly. They include:

- Extreme shortness of breath and difficulty breathing
- Tightness and pain in the chest
- Wheezing, coughing
- Paleness
- Sweating .
- Bluish nails and lips
- Pink, frothy mucus coming from nose and mouth

### What Causes It?

- High blood pressure
- Diabetes
- Coronary or valvular heart disease
- Obesity
- Smoking .
- Exposure to high altitude
- Heroin overdose
- Central nervous system injury
- Infection
- Pregnancy
- Hyperthyroidism
- Hanta virus
- Inhaled toxins Stress
- Blood transfusion

# What to be done

Immediate treatment is required because an attack is life threatening. Once the initial

attack is under control, provider will order blood tests and a urine test to look for what may have caused the attack, undergo a chest X ray and electrocardiogram.

**Treatment Options** 

Medications include diuretics to remove excess fluid from the lungs and morphine to relieve congestion. In rare cases, surgery may be needed.

Complementary and Alternative

Therapies

Alternative therapies can strengthen the cardiopulmonary system.

#### Nutrition

- Increase dietary potassium and magnesium when using diuretics (for example, bananas, apricots, and green leafy nuts, seeds, vegetables).
- Coenzyme Q10 (100 mg twice a day) supports cardiac function.
- L-carnitine (500 mg three times per day) improves endurance.
- Magnesium aspartate (200 mg two to three times per day) increases efficiency of cardiac Magnesium and calcium (1,000 mg per day) improve fluid exchange in the body.
- Potassium aspartate (20 mg per day) improves ability of heart muscle to should be and contract supplemented with diuretic use.
- Vitamin E (400 IU per day) is an antioxidant and protects your heart.
- Vitamin C (1,000 to 1,500 mg three times per day) is an antioxidant.

- Taurine (500 mg twice a day) enhances cardiac function.
- Raw heart concentrate (100 to 200 mg per day) provides essential nutrients to the heart.
- Selenium (200 mcg per protects heart and lung tissues.
- Choline (250 to 500 mg per day) and inositol (150 to 200 mg per day) positively affect heart and lung activity.

#### Herbs

Combine three of these herbs with equal parts of two to three additional herbs from the following categories, according to the underlying cause. Cleavers (Galium aparine), yarrow (Achillea millefolium), oatstraw (Avena sativa), elder (Sambucus nigra), red clover (Trifolium pratense), fresh parsley (Petroselinum crispus), and dandelion leaf (Taraxacum officinale).

For pulmonary edema that does not originate with the heart:

- · Garlie (Allium sativum) helps you cough up mucus, lowers blood pressure, and stimulates your immune system. (Garlie can also be taken as capsules, 1,000 to 4,000 mg per day.)
  - Rosemary (Rosmarinus officinalis) strengthens cardiac function.
  - Linden flowers (Tilia cordata) reduce spasms, lower blood pressure, prevent hardening of the arteries, and relax your respiratory system
  - Indian tobacco (Lobelia inflata) stimulates respiratory function, reduces spasms, and lowers blood pressure.

Thyme leaf (Thymus vulgaris) helps you cough up mucus, tones the respiratory system, and increases circulation.

For pulmonary edema originating with the heart:

- Hawthorn (Crataegus monogyna) helps your heart work better.
- Motherwort (Leonurus cardiaca) antispasmodic properties, palpitations, and relieves heart enhances cardiac function.
- Rosemary strengthens blood vessels and is a heart tonic.

#### Homeopathy

Homeopathy may be useful as a supportive therapy.

#### Physical Medicine

Alternating hot and cold applications with hand or footbaths may help circulation. Alternate three minutes hot with one-minute cold. Repeat three times to complete one set. Do two to three sets per day. Castor oil pack: Apply oil directly to the chest, cover with a clean soft cloth and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes.

### Acupuncture

Acupuncture may improve cardiopulmonary function.

### Massage

Massage can assist with circulation and lymphatic drainage.

### Follow up

Continued medication and surveillance may be required.

# **Special Considerations**

Pregnant women who are obese and have high blood pressure are at increased risk for pulmonary edema.

# 130.Pulmonary Hypertension

Pulmonary hypertension occurs when blood circulation through lungs is restricted by narrowed blood vessels. To maintain blood flow through these narrowed blood vessels, pulmonary artery pressure increases. PH can occur by itself, but is often caused by an existing disease. It is a rare condition that mostly affects women in there 30s or 40s.

# Signs and Symptoms

The most common symptom is shortness of breath with exercise, progressing shortness of breath while at rest. Other symptoms are:

- Getting tired easily
- Fainting
- Cough
- Chest pain

Swelling of the lower extremities
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Coughing up blood

# What Causes It?

- Congenital heart disease
- Mitral stenosis or regurgitation
- Certain kinds of lung disease
- Obesity, especially with sleep apnea 0
- Chronic obstructive pulmonary disease (COPD)
- Cocaine abuse
- Use of dexfenfluramine and other diet drugs

### What to be done

Thorough examination and order laboratory tests are needed to diagnose condition.

### **Treatment Options**

If pulmonary hypertension is the result of an underlying disease, that disease must be treated. Avoid excessive physical stress or exercise. If disease has progressed, may be advised to have lung or heart-lung transplantation.

#### **Drug Therapies**

Some treatments may use include following.

- Supplemental oxygen
- Vasodilator therapy for those with no underlying disease
- Anticoagulant therapy is used if the primary disease is thromboembolic pulmonary disease.
- ventricular Diuretics for right failure
- Erdosteine for mucomodulation.

#### Alternative Complementary and Therapies Nutrition

- Coenzyme Q10 (100 mg twice a day) supports cardiac function, is an antioxidant, and oxygenates tissues.
- L-carnitine (500 mg three times per day) improves endurance and is efficient cardiac for needed function.
- Magnesium aspartate (200 mg two to three times per day) increases efficiency of cardiac muscle and decreases vascular resistance.
- Potassium aspartate (20 mg per day) improves the ability of the heart muscle to contract.
  - Vitamin E (400 IU per day) is an antioxidant and protects the heart.

- Vitamin C (250 to 500 mg twice a day) is an antioxidant, improves vascular integrity, and stimulates immune function.
- Taurine (500 mg twice a day) enhances cardiac function.
- Selenium (200 mcg per day) is a cardioprotective antioxidant.
- Choline (250 to 500 mg per day) and inositol (150 to 200 mg per day) positively affect heart and lung activity.

#### Herbs

Combine the following herbs in equal parts in tincture form and take 30 drops three to four times per day.

- Hawthorn (Crataegus monogyna) helps your heart work efficiently without making it work harder. Strengthens the integrity of and mildly dilates blood vessels.
- Garlic (Allium sativum) helps you cough up mucus, lowers blood immune stimulates pressure, system, and helps prevent hardening of the arteries.
- Rosemary (Rosmarinus officinalis) function, cardiac strengthens prevents hardening of the arteries, prevents spasms, and improves circulation to the lungs.
- (Tilia cordata) Linden flowers lowers blood prevents spasms, pressure, prevents hardening of the arteries, relaxes respiratory system, and helps to cough up mucus. Also stimulates immune function.
- Ginkgo (Ginkgo biloba) improves peripheral blood flow and decreases platelet aggregation.
- Indian tobacco (Lobelia inflata) respiratory function, stimulates reduces spasms, and lowers blood pressure. Used in high doses this herb can have toxic side effects. Using small amounts in a formula (one-fourth or less) will minimize the risk of toxicity.

#### Homeopathy

Homeopathy may be useful as a supportive therapy.

#### **Physical Medicine**

Caster oil pack: Apply oil directly to chest, cover with a clean soft cloth and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes. Use for three consecutive days. Contrast hydrotherapy. Alternate hot and cold applications to the chest. Alternate three minutes hot with one-minute cold. Repeat three times to complete one set. Do two to three sets per day. For very sick patients use cool and warm applications to decrease the contrast. Steams. Using three to six drops of essential oils in a humidifier, vaporizer, atomizer, or warm bath will stimulate respiration and

circulation. Consider eucalyptus, rosemary, thyme, or lavender.

#### Acupuncture

May support treatment of symptoms through an increase in circulation.

#### Follow up

The prognosis for pulmonary hypertension is generally poor.

#### **Special Considerations**

For the most part, women who have primary pulmonary hypertension should not get pregnant because the condition is dangerous for both mother and baby.

### 131. Pyloric Stenosis

Pyloric stenosis is a narrowing of the pylorus due to thickening of the muscle. Pyloric stenosis may be present at birth or acquired later in life. It is the most common cause of gastrointestinal obstruction in infants, appearing in approximately 2 out of every 1000 live births. If not treated quickly, the baby will become dehydrated and suffer from electrolyte imbalance. In recent years, prompt diagnosis ultrasound followed by surgery has dramatically improved the outlook for infants with this condition.

### Signs and Symptoms

- Vomiting, often projectile
- Persistent hunger
- Weight loss
- Dehydration
- Lethargy
- Infrequent or absent bowel movements
- Jaundice (yellowing of the skin and eyes)

#### What Causes It?

It includes heredity; muscle and nerve abnormalities in the stomach swelling caused by allergies, leading to enlargement of stomach muscles around the pylorus; increased production gastrin, which increases hormone cell growth in the stomach muscles; chromosomal abnormalities; and maternal stress in the third trimester.

#### Who's Most At Risk?

Age: infants ages 3 to 12 weeks

- Gender: much more prevalent in males
- Race: most common in Caucasians
- Birth weight: low birth weight is associated with lower incidence
- Maternal age: older age and higher education level in the mother is associated with lower incidence
- Infants treated with oral erythromycin may be at increased risk

### What to be done

Pyloric stenosis is a medical emergency. The emergency medical team will perform a physical examination, check for gastric symptoms, and use ultrasound to determine whether the thickness and length of the pyloric muscle are abnormal.

### Treatment Options Prevention

Avoid use of erythromycin, an antibiotic, in infants. Infants receiving oral erythromycin may be at increased risk for pyloric stenosis. Therefore, physicians must use caution when recommending this antibiotic for infants. Reduce stress during pregnancy, particularly during the third trimester.

### **Treatment Plan**

Once emergency measures have been taken, the baby will probably need surgery. Occasionally, drug therapy may be considered prior to or, rarely, instead of surgery.

# Drug Therapies

In some infants, treatment with atropine sulfate, given intravenously initially and

then continued by mouth, has corrected this situation.

Surgical and Other Procedures

A surgical procedure called a Ramstedt pyloromyotomy can cure the disease. The infant should have nothing to eat or drink before surgery and for 12 to 24 hours after surgery.

Complementary and Alternative Therapies

Women who are planning to become pregnant should be counseled about proper nutrition. Dietary habits and, in particular, folic acid intake are important. Prenatal vitamins may also supply some of the vital nutrients that the body needs just before conception and during pregnancy.

#### Nutrition

multivitamins, containing Prenatal micronutrients including folic acid, may protect against neural tube defects as well as other birth defects such as pyloric stenosis. Folic acid is usually an ingredient in vitamins. Using folic prenatal supplements daily around the time of conception plays a key role in reducing the occurrence of birth defects. The suggested dose is at least 0.4 mg folic acid per day. Daily doses as high as 4 to 5 mg may be necessary in high risk mothers, mothers who have previously given birth to a child with neural tube defects, mothers with diabetes mellitus, and women on antiepileptic medications and other drugs that interfere with folate.

Synthetic folic acid, which is a monoglutamate, is preferable to folate that occurs naturally because it is absorbed faster and is more resistant to temperature changes. Folate obtained from food sources is fragile and easily destroyed by the heat of cooking. In addition, dietary folate, which comes as a polyglutamate, has to be converted into the monoglutamate form by the body before it can be absorbed.

Additional nutritional measures that may be helpful in the treatment of pyloric stenosis in infants include the use of probiotics. These substances encourage the growth of normal, helpful bacteria in the intestinal tract. Taking a *Lactobacillus* supplement along with antibiotics may reduce irritation and inflammation in the infant's stomach. The breastfeeding mother can take one capsule with meals. Alternatively, one

capsule per day in three divided doses may be given to the newborn

Avoiding foods that may cause allergies could also benefit newborns prior to developing pyloric stenosis by decreasing the possibility of stomach upset or colic. Foods that commonly cause allergies include dairy products, peanuts, soy, eggs, fish, and wheat. If breastfeeding, then caffeine, spicy foods, beans, and certain vegetables such as broccoli should also be avoided. Non-breastfed infants may do better on a soy formula or a hydrosylate formula because these formulas are easier to digest.

#### Herbs

Herbal formulas for colic may be helpful for prevention of pyloric stenosis by easing spasms in the stomach and intestines. These formulas typically include dill (Anethum graveolens) and/or chamomile (Matricaria recutita) given to the infant by drops or to the breastfeeding mother. Traditionally, these herbs have been used for treatment of upset stomach. Catnip (Nepeta cataria) may also be included.

#### Homeopathy

- Arsenicum album for vomiting immediately following ingestion of food or drink; vomiting is accompanied by excessive abdominal pain, restlessness, fatigue, chills, and dehydration
- Bryonia for individuals whose stomachs are sensitive to touch but may experience relief from lying on the stomach
- Phosphorus for excessive vomiting immediately following ingestion of food or drink; vomiting is accompanied by weakness, drowsiness, anxiety, restlessness, and dehydration; the infant for whom this treatment is appropriate tends to be mild-mannered and generally to have a good appetite
- Silicea for vomiting after drinking milk (including breast milk) in those who have a delicate constitution and are slow to develop

Acupuncture

Acupuncture may relieve factors that can cause pyloric stenosis and may help in recovery from surgery.

#### Massage

Touch is an important part of infant well being. Massage may reduce stress and relieve spasms in the stomach and intestines. Although no scientific studies have evaluated the effectiveness of massage in the treatment or prevention of pyloric stenosis, it may be considered in the case of a baby with colic, for example.

#### **Prognosis/Possible Complications**

Early and quick diagnosis and treatment are necessary to avoid life-threatening fluid and electrolyte imbalance. If detected quickly, the prognosis for recovery and improved growth is very good. Possible complications include vomiting that persists after surgery, gastritis, hiatus hernia, or another obstruction.

### 132.Radiation Damage

Radiation damage may occur after a patient receives radiation therapy or is exposed to products or substances containing radiation, such as excessive X-ray imaging, nuclear power, or fallout from atomic weapons. Radiation damage may cause cancer, birth defects, and other serious health problems. Acute radiation sickness occurs within 24 hours of exposure. Chronic radiation syndrome involves a range of symptoms occurring over an extended time.

### Signs and Symptoms

Radiation damage is accompanied by the following signs and symptoms, which can occur immediately or appear months or years later.

- Radiation syndrome—malaise, weight loss, nausea, vomiting, diarrhea, sweating, fever, headache; with bleeding and complications affecting the digestive system, nervous system, heart, and lungs
  - Central nervous system diseases
- Kidney, liver, or gastrointestinal problems
- Poor growth in children
- Skin conditions
- Pericarditis (inflammation of the sac around the heart)
  - Lung infections or conditions, respiratory failure
  - Vision impairment; cataracts
  - Dysfunction of the reproductive organs

#### What Causes It?

Damage occurs when radiation interacts with oxygen, causing certain molecules to form that are capable of damaging or breaking strands of DNA in the body's cells. This can result in cell death.

#### Who's Most At Risk?

People who have been exposed to radiation and who also have the following conditions or characteristics are at risk for developing radiation damage.

- High dose of radiation exposure
- Young age at time of exposure
- Use of chemotherapy, antibiotics
  - Exposure to radiation prior to birth (while in the womb)

#### What to be done

A physical exam, lab tests, pathology tests, and imaging procedures such as barium radiography or colonoscopy may be performed.

# Treatment Options Prevention

If receiving radiation treatment to treat cancer, physician can take certain precautions to help prevent or reduce the risk of radiation damage. These may include administering low-dose radiation, using radio-protectant chemicals, and using special shields for other parts of body.

### Treatment Plan

The treatment plan depends on the type of radiation damage. Decontamination, if warranted, is essential. Transfusion of fluids, red blood cells, white blood cells, and platelets may be necessary.

## Drug Therapies

Prescribe a variety of medications, depending on the specific ailments resulting from radiation damage.

# Surgical and Other Procedures

Surgery may be required to prevent further cell damage, or to graft healthy tissue onto a damaged area.

### Complementary and Alternative Therapies Nutrition

- Follow a whole-foods diet of fresh fruits and vegetables, whole grains, legumes, and anti-inflammatory fats (for example, cold-water fish, nuts, and seeds).
- Avoid pro-inflammatory and nutrient-poor foods such as caffeine, alcohol, sugar, saturated fats (for example, animal products), refined foods, and additives.

Potentially beneficial nutrient supplements include the following.

- Vitamin C (1,000 mg three to four times per day), vitamin E (400 IU two to three times per day), coenzyme Q10 (100 mg two to three times per day), and melatonin (2 to 10 mg per day)
- Glutathione (500 mg two times per day)
- Vitamin A (10,000 IU per day) or beta carotene (25,000 IU per day) and zinc (30 mg per day).
- L-glutamine (3 to 10 g three times per day) protects intestinal mucosa.
- Bromelain (250 to 500 mg between meals) decreases inflammation. Use with turmeric (*Curcuma longa*, 500 mg four times per day).

#### Herbs

- Rutin (100 mg to 200 mg one to three times per day)
- Milk thistle (Silybum marianum),
   100 mg three times per day
- Gotu kola (*Centella asiatica*), 1,000 mg four times per day or standardized extract 60 mg twice a day

The following may be helpful for acute effects.

 Marshmallow root (Althaea officinalis) tea to soothe inflamed tissues. Soak 1 heaping tbsp. of root in 1 quart of cold water overnight. Strain and drink throughout the day. May be taken long-term.

- Equal parts of coneflower (Echinacea purpurea), goldenseal (Hydrastis canadensis), marigold (Calendula officinalis), licorice root (Glycyrrhiza glabra), plantain (Plantago lanceolata), and wild lettuce (Lactuca virosa) provide immune support, enhance healing, and relieve pain. Take 30 to 60 drops four times per day for six to eight weeks.
- For long-term use, combine goldenseal, licorice root, marigold, red clover (*Trifolium pratense*), wild yam (*Dioscorea villosa*), and meadowsweet (*Filipendula ulmaria*). Take 30 to 60 drops two to four times per day.

#### Homeopathy

Radium bromatum is specific for radiation poisoning, especially followed by arthritic complaints. Acute dose is three to five pellets of 12X to 30C every one to four hours until symptoms are relieved.

### **Physical Medicine**

A body wash of coneflower, goldenseal, comfrey root (Symphytum officinalis), and sea buckthorn (Hippophae rhamnoides) helps healing and reduces the risk of infection. Vitamin E oil applied to the skin twice daily, and Aloe vera extract applied as needed help healing.

### **Prognosis/Possible Complications**

The outcome varies depending on the level of radiation exposure, the promptness of treatment, and the thoroughness of ongoing monitoring. Long-term complications may include cancer, liver failure, deformity, sterility, and thickening and scarring of lung, liver, and kidney tissue.

### 133.Raynaud's Phenomenon

Raynaud's phenomenon is a condition where blood vessels in the fingers and toes (and sometimes in the earlobes, nose, and lips) constrict. It is usually triggered by cold or by emotional stress.

Episodes are intermittent and may last minutes or hours. Women are affected five times more often than men. It usually occurs between the ages of 20 and 40 in women and later in life in men.

#### Signs and Symptoms

- Changes in skin color in the fingers or toes and sometimes in the nose, legs, or earlobes (may occur in three phases: white, blue, then red)
- Throbbing, tingling, numbness, and pain
- Deterioration of the pads on fingertips or toes
- · Gangrenous ulcers near fingertips

#### What Causes It?

Risk factors for Raynaud's phenomenon include the following.

- Cigarette smoking
- Age in women (onset primarily between the ages of 20 and 40)
- Occupation (for example, using vibrating tools such as chain saws and jackhammers)
- Drug use, including some cancer drugs, narcotics, and over-thecounter cold medications
- · Electric shock injury
- · Previous frostbite
- Repetitive physical stress (for example, typing or playing the piano)
- Primary pulmonary hypertension
- Exposure to cold
- Psychological stress
- General medical conditions such as rheumatoid arthritis, scleroderma, systemic lupus erythematosus, and carpal tunnel syndrome

#### What to be done

Conduct several laboratory tests, such as the antinuclear antibody test, to look for antibodies associated with connective tissue disease or other autoimmune disorders.

### **Treatment Options**

One of the most important preventive measures is to stop smoking because nicotine shrinks arteries and decreases blood flow. Other preventive measures include the following.

- Protecting from cold, especially outdoors in the winter
- Guarding against cuts and other injuries to affected areas
- Exercising, such as raising your arms above head and then whirling them vigorously, to increase circulation

#### **Drug Therapies**

Several types of drugs are used to treat Raynaud's phenomenon. Calcium-channel blockers can reduce the frequency and severity of attacks. Vasodilators are also recommended.

### **Surgical Procedures**

If attacks become extremely frequent and severe and interfere with your well being and ability to work or function, a surgical procedure called sympathectomy may be used. This surgery becomes less effective as the disease advances.

# Complementary and Alternative Therapies Nutrition

- Vitamin E (400 to 800 IU per day) improves circulation and helps certain blood cells function well.
- Vitamin C (1,000 mg two to three times per day) supports connective tissue and reduces swelling.
- B-complex (50 to 100 mg per day) reduces stress.
- Coenzyme Q10 (100 mg two times per day) promotes healthy tissues.
- Calcium (1,500 mg per day) and magnesium (200 mg three times per day) relieves spasm.
- Omega-3 oils (1,500 mg two to three times per day) reduce swelling and help certain blood cells function well.
- Zinc (30 to 50 mg per day) boosts your immune system.

#### Herbs

- Hawthorn berries (Crataegus laevigata) strengthens and mildly dilates blood vessels
- Ginkgo (Ginkgo biloba) (120 to 160 mg per day for dried extracts) keeps blood cells from sticking together
- Rosemary (Rosmarinus officinalis) is a gentle relaxant
- Ginger root (Zingiber officianale) is a mild soothing agent
- Prickly ash bark (Xanthoxylum clava-herculis) enhances lymph activity and integrity of blood vessels

### Homeopathy

Homeopathy may be useful as a supportive therapy.

Acupuncture

Acupuncture may be useful as an adjunct

Follow up

Milder cases can be brought under control through self-help measures.

#### Special Considerations

Many drugs used to treat Raynaud's phenomenon can affect a growing fetus and should not be used by pregnant women.

### 134.Reiter's Syndrome

Reiter's syndrome has many possible symptoms, with arthritis being an important one. There is no cure for Reiter's syndrome, but you can control symptoms.

### Signs and Symptoms

- Arthritis-includes pain, swelling, stiffness, and redness of joints. Usually occurs on one side of the body and usually involves joints of the spine, pelvis, legs, fingers, toes, wrists, feet, or ankles
- Conjuctivitis (inflammation under eyelids)—usually brief and mild
- Iritis (inflammation of the iris)affects 5 percent of people with immediate needs and medical treatment to avoid eye damage
- Urinary tract infection—burning during urination may or may not occur; may have pus drainage from penis
- Painless, shallow ulcers on the penis
- Pus-filled sores on soles, palms, and penis; mouth sores
- Weight loss, malaise, morning stiffness, fever
- Heart problems (rarely)

#### What Causes It?

The following factors often precede Reiter's.

- HLA-B27 gene—20 percent of people who have this gene get Reiter's; about 80 percent of people with Reiter's have the HLA-B27 gene.
  - triggers, such as Bacterial salmonella, shigella, campylobacter
- transmitted Sexually triggers, such as chlamydia
  - White males ages 20 to 40 are at higher risk.

### What to be done

Tell about any intestinal conditions or sexually transmitted diseases you have had

recently. Blood test to exclude other diseases and to see if the HLA-B27 gene.

#### **Treatment Options Drug Therapies**

- Nonsteroidal anti-inflammatory drugs (NSAIDs)
  - Corticosteroids
- Sulfasalazine—a promising experimental drug for arthritis
- Methotrexate—an experimental drug taken orally or by injection for chronic arthritis; frequent blood and liver tests are needed

#### Alternative Complementary and **Therapies** Nutrition

- Glucosamine sulfate (500 mg three times a day): stimulates cartilage growth and may be as effective for pain relief as NSAIDs without the side effects.
- Avoid nightshade family (tomatoes, eggplant, peppers, potatoes, tobacco); decrease saturated fats and alcohol (which can cause inflammation); increase oily fish, nuts, and flaxseed (which can decrease inflammation); increase fruits and vegetables (flavonoids).
- Vitamin C (1,000 to 3,000 mg a day), vitamin E (400 to 800 IU a day), beta-carotene (25,000 IU per day), selenium (200 mcg a day)
- Essential fatty acids (2 tbsps. oil a day or 1,000 to 1,500 mg twice a day): mix of omega-6 (evening primrose) and omega-3 (flaxseed)
- Minerals: zinc (45 mg a day), copper (1 mg a day), bromelain (500 mg three times a day) to reduce inflammation

Turmeric (Curcuma longa), 400 mg three times a day: helps with morning stiffness and joint instability, works well when taken with bromelain. For urethritis: Mix three to four of these herbs in equal amounts and use 1 tsp. of mixture. Drink 1-cup tea three times a day or 30 drops tincture three times a day. Take daily during an acute flare-up and two weeks of the month as a preventative.

- Juniper (Juniperus communis): a diuretic, for inflammatory conditions of the urinary tract; avoid if you have kidney disease.
- Uva ursi (Arctostaphylos uva ursi): used as an antibacterial and antiinflammatory for lower urinary tract; for acute cases of Reiter's only
- Horsetail (Equisetum arvense): soothing diuretic
- Licorice (Glycyrrhiza glabra): soothing, anti-inflammatory; do not take if you have high blood pressure.
- Meadowsweet (Filipendula ulmaria): anti-inflammatory

For iritis:

# • Horsetail, licorice, meadowsweet (see dosage directions above)

• Eyebright (Euphrasia officinalis) and bilberry (Vaccinium myrtillus) have been historically used for inflammation of the eyes. Drink 30 to 60 drops tincture three times a day, or 1 cup tea three times per day, or use tea to make compresses for acute relief: soak a cotton ball or cloth in a cooled tea and place over the eyes.

#### Acupuncture

As with other forms of arthritis, acupuncture may be effective at stimulating the immune system and reducing inflammation.

#### Follow up

The initial attack usually lasts three to six months. Most people maintain near-normal lifestyles with physical and occupational adjustments.

# 135.Rheumatoid Arthritis; Arthritis, Rheumatoid (RA)

Rheumatoid arthritis (RA) is a chronic disease characterized by inflamed joints leading to swelling, pain, stiffness, and the possible loss of function. It occurs when the body's immune system attacks tissues that make up joints. This destroys the joint's protective cartilage (the firm, rubbery tissue that cushions bones at the joints). Healthy cartilage allows bones to glide smoothly over one another. Normal cartilage also absorbs the shock of physical movement. The cartilage in those with rheumatoid arthritis breaks down and wears away. As a result, the bones rub together, causing the pain, swelling, and stiffness associated with this condition. inflammatory process of rheumatoid arthritis is not confined to joints, but may damage other organs in the body as well. In addition, rheumatoid arthritis can occur in this is known children. as juvenile rheumatoid arthritis (JRA).

#### Signs and Symptoms

RA usually develops slowly over time, with the following symptoms:

 Morning stiffness -- waking up with stiff joints (often the wrists and base of the fingers; ankles, balls of the

- feet, elbows, and/or knees may also be involved)
- Joint pain with warmth, swelling, tenderness, and stiffness of the joint after inactivity
- Limited range of motion in the affected joints
- Fatigue
  - Low grade fever (when joints are acutely inflamed)
  - Small, round, firm bumps (called nodules) under the skin; you can feel these, but they are generally painless

Rheumatoid arthritis almost always follows a symmetrical pattern. This means that the same joints on opposite sides of the body are affected. This is important because it will help your doctor distinguish rheumatoid from other types of arthritis. Juvenile rheumatoid arthritis, also known as Still's disease, is usually preceded by a high fever and shaking chills; a pink skin rash may also be present.

#### Causes

Medical researchers do not know exactly why RA develops. They speculate that a combination of factors, including genetic susceptibility, an abnormal immune response, and certain changes in the body such as an infection or hormonal shift, can trigger its development.

## Risk Factors

- Age -- although the disease can occur at any age, it generally starts in young adulthood, with peak onset between ages 25 and 55.
- Female sex -- women are affected two and a half times more often than men, and have a greater chance of having a severe case
- Family history -- having relatives with this type of arthritis increases your risk of getting it yourself
- Cigarette smoking it appears that heavy smoking over a long period of time increases your risk of getting RA
- History of blood transfusions
- Obesity
- Coffee intake controversial; one Finnish study reported a direct association between coffee consumption and an increased risk for RA, but the study did not account for other factors such as the way coffee is prepared in Finland (typically without filters). Further investigation in other countries is needed.
- Medication -- interferon-alpha, a drug used to treat hepatitis, autoimmune diseases, and other diseases has triggered RA in rare cases

#### Diagnosis

Likely to use a combination of the following methods to diagnose the disease and rule out the possibility of other causes of arthritis:

Medical history – assessing symptoms by asking when they started and how they changed over time, including which joints are currently involved and have been affected previously. Asked about other medical conditions that could be contributing to current joint symptoms, and whether any factors (such as a fall or injury) could have caused these symptoms. The doctor will also determine whether taking

might interact with drugs that he or she is considering prescribing.

- Physical exam -- each of the affected joints is examined for redness and swelling, the presence of fluid in the joint, and the strength and range of motion of the joint.
- Blood tests -- are performed to look for general signs of inflammation, to help eliminate the possibility of other types of arthritis such as osteoarthritis or Lyme's disease, and to check for possible markers of RA such as antibodies called rheumatoid factor that collect in the synovium.
- Joint aspiration -- fluid may be withdrawn from the joint for evaluation using a needle and syringe. The synovial fluid, as it is called, is evaluated for signs of inflammation and to eliminate other causes of your arthritis.
- X-rays

#### **Treatment Approach**

usually requires Rheumatoid arthritis including various treatment, lifelong medications, physical therapy, education, and possibly surgery. Treatment is aimed at relieving symptoms and preserving joint function. Regular visits will be necessary to monitor the progress of the disease and side effects of drugs. This might also entail regular blood and urine tests. Frequently, the disease can be controlled with a combination of treatments. Treatment may vary depending on the severity of the symptoms. Surgery may be needed, if medications fail.

For the past 10 years, studies have shown that early, aggressive treatment for RA can delay the onset of joint destruction. In addition to rest, strengthening exercises, and anti-inflammatory agents, the standard of care is to start therapy with disease-modifying anti-rheumatic (DMARDs) - that is, drugs that actually alter the course of the disease rather than just relieve symptoms. Studies show that certain dietary supplements, particularly omega-3 fatty acids, show promise in to relieve symptoms. helping symptom-relieving measures might include bathing in sulfur baths or warm pools, applying capsaicin to the skin for pain, and having electrical stimulation to increase muscle strength.

Lifestyle

motion exercises and Range of individualized exercise programs prescribed by a physical therapist can help to maintain joint motion and strength and delay the loss joint function. Joint protection techniques, such as heat and cold treatments and splints or orthotic devices to support and align joints, may be very helpful.

#### Medications

The following drugs are used to treat RA.

- Disease-modifying anti-rheumatoid drugs (DMARDs)-include gold compounds and methotrexate. Methotrexate is used most often, sometimes with antimalarial drugs (such as hydroxychloroquine) or sulfasalazine, and has been proven effective. **DMARDs** can serious side effects such as kidney, liver, lung, or retinal damage. Other DMARDs include D-penicillamine, cyclosporine, and leflunomide.
- Aspirin and nonsteroidal antiinflammatory drugs (NSAIDs)reduce pain and inflammation.
- Cyclo-oxgenase-2 (COX-2) inhibitors-such as celecoxib and rofecoxib, reduce pain and inflammation with fewer gastrointestinal side effects than **NSAIDs**
- Corticosteroids—decrease inflammation and control pain given orally or intravenously. Some potentially possibly serious side effects (such as diabetes, cataracts, osteoporosis, weight gain, and high blood pressure) are associated with this class of drugs, if used over a time; therefore, long use of corticosteroids for RA is usually limited to short courses and as low a dose as possible.
- Immune suppressants—are used for serious cases of RA when all other medications have failed. These include azathioprine cyclophosphamide.

Some promising new drugs include:

Tumor necrosis factor (TNF) modifiers—such as etanercept, a new, and increasingly popular, medication, and infliximab. Both are FDA-approved for moderate to severe cases of RA. These drugs block TNFs (inflammatory proteins) and are given by intravenous injection. Etanercept reduces pain and swelling with fewer severe side effects than DMARDs; infliximab reduces symptoms of RA and in combination with methotrexate may halt progression of joint damage. TNF modifiers are associated with side effects such as severe infection.

### Surgery and Other Procedures

Occasionally, surgery may be required to treat severely affected joints. The most successful surgeries are those on the knees and hips. Synovectomy is a common surgical procedure. A later alternative is total joint replacement with prosthesis. Surgeries can be expected to relieve pain, correct deformities, and modestly improve joint function. In extreme cases, total knee or hip replacement can mean the difference between being completely dependent on others and having an independent life at

#### **Nutrition and Dietary Supplements** Diet

Foods rich in the protein, B vitamins, vitamin E, zinc, and selenium may be particularly important. There are reports of people with RA who experienced improvement in their symptoms when they switched from a typical Western diet (high in animal protein and simple sugars) to a vegan diet with lots of uncooked berries, fruits, vegetables, nuts, roots, seeds, and sprouts. Vegan diets contain no animal products and obtain protein from vegetable sources. Elimination/provocation diets (also called elimination/re-challenging designed to detect by allergens systematically taking certain foods out of the diet and reintroducing them one at a time can be considered but should be strictly supervised by a qualified physician and/or dietitian. count to that a second

Supplements Because supplements may have side effects or interact with medications, they should be taken only under the supervision of a knowledgeable physician.

Bromelain

Bromelain may help reduce the pain associated with rheumatoid arthritis. In fact, studies of people with osteoarthritis suggest that bromelain supplements may be as effective as some commonly used nonsteroidal anti-inflammatory (NSAID) medications for reducing pain associated with this other type of arthritis. Bromelain is generally recommended for no longer than 8 to 10 days in a row. Quercetin and bromelain are often taken together.

Copper

Oral copper supplements reduce the development and progression of arthritis. People with RA apply copper solutions to there skin or wear copper bracelets in hopes of relieving pain and inflammation. Sweat can interfere with how well the topical copper solutions and bracelets work.

Manganese

People with rheumatoid arthritis tend to have low levels of MnSOD. Manganese supplementation is thought to increase MnSOD activity. Also, manganese is often combined with glucosamine and/or chondroitin, two substances often used to help treat the other major type of arthritis, osteoarthritis.

**Omega-3 Fatty Acids** 

Omega-3 fatty acids reduce inflammation and help prevent arthritis. Omega-3s are essential fatty acids, meaning that the body requires them but must obtain them from food. Omega-3 supplements reduce tenderness in joints, decrease morning stiffness, and allow for a reduction in the amount of medication needed for rheumatoid arthritis. Good sources for omega-3 fatty acids include fish oils (from cold water oily fish) and plant oils (for example, rapeseed [canola] oil, soybeans, soybean oil, pumpkin seeds, pumpkin seed oil, flaxseeds, flaxseed oil, walnuts, and walnut oil).

Another potential source of omega-3 fatty acids is the New Zealand green lipped mussel (Perna canaliculus), used for centuries by the Maori people for good health. In a trial involving 28 people with RA, nearly 70% of those who received P. canaliculus extracts experienced the following:

- Decreased joint stiffness and pain
  - Increased grip strength
  - Enhanced walking pace

Note, however, that 10% of participants experienced a temporary worsening of symptoms when first taking the supplement. In addition, it is better to use lipid extracts of P. canaliculus rather than powder as there is less chance of an allergic reaction. People who are allergic to seafood should avoid P. canaliculus.

**Omega-6 Fatty Acids** 

Some preliminary information indicates that gamma-linolenic acid (GLA), an omega-6 fatty acid, from evening primrose oil (EPO), borage oil, or black currant seed oil, may diminish joint pain, swelling, and morning stiffness. GLA may also allow for lower amounts of pain medication. Pay attention, over 1 to 3 months of use, to whether your symptoms get better or not. Note that some researchers theorize that borage oil may not be safe to use with non-steroidal antiinflammatory drugs (such as ibuprofen). This theory needs to be tested. At the same time that this particular omega-6 fatty acid (namely, GLA) may be helpful, other omega-6 fatty acids (linoleic acid, found in vegetable oils and arachidonic acid, found in meat) should be avoided because these promote inflammation.

Quercetin

Quercetin has anti-inflammatory properties and inhibits the type of inflammation that can occur in the joints of those with arthritis. Bromelain can enhance the effects of quercetin.

Selenium

Selenium is an essential mineral found in tiny amounts in the body. It is also an antioxidant, and is found in fish, shellfish, Brewer's yeast, wheat germ, garlic, whole grains, sunflower seeds, and Brazil nuts. Low levels of selenium in the blood may be associated with increased risk of RA. Some experts believe that the combination of selenium and vitamin E can relieve symptoms of RA.

Sulphur

Sulphur is a naturally occurring mineral found primarily near hot springs and volcanic craters. It is available in two forms-dimethyl sulfoxide (DMSO) and methylsulfonylmethane (MSM). Sulphur-

containing mud baths (often called balneotherapy) is one of the oldest forms of therapy to relieve pain for people with arthritis, and this tradition is supported by scientific studies. Soaks in the Dead Sea, with or without mudpacks, may be particularly beneficial. The benefits that you can experience from sulfur baths if you have arthritis include:

- Improved strength
- Less morning stiffness
- Decreased inflammation and swelling
- · Diminished pain

More studies are needed to determine whether topical application of DMSO is effective for reducing pain.

#### Vitamin B5 (Pantothenic Acid)

Blood levels of vitamin B5 are lower in people with RA than those without this condition. A study concluded that 2,000 mg/day of calcium pantothenate (a form of vitamin B5) improved symptoms of RA including morning stiffness and pain. There may be some benefit to making sure that there is an adequate amount of vitamin B5 in your diet. Vitamin B5 is found in a wide variety of foods, such as fresh meat and vegetables and whole grains.

### Vitamin B6 (Pyridoxine)

Low levels of vitamin B6 have been associated with rheumatoid arthritis. This may be due to low dietary intake of vitamin B6. In addition, methotrexate and penicillamine, drugs sometimes prescribed for RA, can reduce the levels of vitamin B6 in people taking either of these medications.

### Vitamin B Complex

Eating a balanced diet, including a complete vitamin B complex, is a good practice. It is not known if taking extra vitamin B5 or B6 is of any use if you have arthritis.

## Vitamin B9 (Folic Acid)

Methotrexate, commonly prescribed for RA, increases your body's need for folic acid. Taking a folic acid supplement decreases the side effects from the drug without reducing its effectiveness.

#### Vitamin D

Vitamin D is needed to maintain healthy cartilage. Vitamin D has been shown to prevent the breakdown of cartilage in people with osteoarthritis. It is possible that adequate amounts of vitamin D may also be

useful for those with RA. Vitamin D is found in cod liver oil, fatty fish, eggs, and fortified milk and cereal. If you follow a vegan diet, don't get enough exposure to the sun, or are obese or older, you may be prone to having low levels of vitamin D and may need to take a supplement.

#### Others

- Creatine
- Melatonin
- Antioxidants in general, vitamins C and E in particular
- Vitamin B2 (Riboflavin)
- Lipase

#### Herbs

- Burdock (Arctium lappa and other Arcticum spp)
- Goldenrod (Solidago virgaurea)
- Horsetail (Equisetum arvense)
- Lavender (Lavendula augustifolia)
   used topically
- Pau d'Arco (Tabebuia avellanedae)
- Stinging nettle (Urtica dioica)
- Turmeric (Curcuma longa)
- Wild yam (Dioscorea villosa)

Other herbs that may be considered by an herbalist that do have some scientific backing include:

# Black cohosh (Cimicifuga racemosa)

It may help reduce inflammation associated with the two main types of arthritis, osteoarthritis and rheumatoid arthritis. Researchers concluded that a combination of black cohosh, willow bark (Salix spp.), sarsaparilla (Smilax spp.), guaiacum (Guaiacum officinale) resin, and poplar bark (Populus tremuloides) may help relieve symptoms of osteoarthritis.

# Capsaicin (Capsicum frutescens)

Capsaicin is the main component in hot chilipeppers (also known as cayenne). Applied to the surface of the skin, it is believed to deplete stores of a substance that contributes to inflammation and pain in arthritis. Pain reduction generally begins 3 to 7 days after initially applying the capsaicin cream to the skin, but may be most pronounced after about 4 weeks of use. Wash hands well with vinegar after use and avoid touching the eyes.

# Cat's claw (Uncaria tomentosa)

People with RA who were taking the drugs sulfazaline or hydroxychloroquine, treatment with an extract from cat's claw for

24 weeks resulted in reduced joint pain and swelling.

Devil's claw (Harpagophytum procumbens)

Devil's claw has been evaluated for helping to treat the other main type of arthritis, osteoarthritis, and may prove to be beneficial for RA. For people with osteoarthritis, devil's claw appears to decrease pain, improve joint function, and reduce the amount of medications used.

### Feverfew (Tanacetum parthenium)

Anti-inflammatory properties of feverfew and many professional herbalists recommend feverfew for the treatment of rheumatoid arthritis.

### Ginger (Zingiber officinale)

Ginger extract has long been used in traditional medical practices (such as Ayurvedic and Chinese) to decrease inflammation. There have been case reports of the benefit of ginger for RA in the medical literature. A man with RA consumed fresh ginger lightly cooked in meat and vegetable dishes every day and after 3 months was completely free of pain and swelling.

### Willow bark (Salix spp.)

This herb has been used traditionally for arthritis because it can decrease pain and reduce inflammation. In fact, it was from salicylic acid, one of the ingredients in willow bark, that aspirin was originally synthesized.

#### Acupuncture

Acupuncturists treat people with rheumatoid arthritis based an individualized on assessment of the excesses and deficiencies of qi located in various meridians. A qi deficiency is usually detected in the spleen and/or kidney meridians. Moxibustion (a technique in which the herb mugwort (Artemesia vulgaris) is burned over specific acupuncture points) may be used to strengthen the entire energy system. Qualified acupuncturists may also provide lifestyle, dietary, and herbal advice to people with RA. Local treatment to the painful areas and related sore points may be applied, either with a needle or moxibustion. In general, however, given the current lack of evidence, acupuncture should be used as supportive treatment conventional medical therapy.

### Chiropractic

Chiropractors do not treat red, swollen joints, and high velocity chiropractic manipulation is considered inappropriate in areas of the body affected by this condition. However, some chiropractors report that spinal manipulation may decrease pain and enhance joint mobility when used in between flare-ups for people with rheumatoid arthritis.

#### Massage and Physical Therapy Exercise

It is important to maintain a balance between rest and exercise (which will relieve stiffness and weakness). Studies have suggested that even as little as 3 hours of physical therapy over 6 weeks will help you if you have RA, and that these benefits are sustained. The goal of exercise is the following:

- To maintain a wide range of motion
- To increase strength, endurance, and mobility
  - Improve general health
  - · Promote well-being

While traditional guidelines have restricted RA patients to only gentle exercise, recent research suggests that more intense exercise may not only be safe, but may actually produce greater muscle strength and overall functioning. Signs from your body are the best guides for how long or hard you should exercise.

- If you feel sharp pains while exercising, stop immediately.
- If lesser aches and pains continue for more than 2 hours afterwards, then try a lighter exercise program for a while.
- Using large joints instead of small ones for ordinary tasks can help relieve pressure. For example, use your hip to close doors or the palm of hand to push buttons.

Balneotherapy (Hydrotherapy or spa therapy)

Balneotherapy is one of the oldest forms of therapy for pain relief for people with arthritis. The term "balneo" comes from the Latin word for bath (balneum) and refers to bathing in thermal or mineral waters. Sulfur-containing mud baths, for example, have been shown to relieve symptoms of arthritis. The goals of balneotherapy for arthritis include:

- Improving range of joint motion
- Increasing muscle strength
- Eliminating muscle spasm
- Enhancing functional mobility

Easing pain

Exercising and swimming in a heated pool may also be beneficial.

#### **Mechanical Aids**

A variety of mechanical devices, called orthoses, are available for people with RA to help support and protect joints. Made from lightweight metal leather, elastic, foam, and plastic, orthoses allow some movement within the affected joint and do not restrict nearby joints. For example, splints or braces help align joints and properly distribute weight. Shock-absorbing soles in shoes can help in daily activities and during exercise. These mechanical aids are used most frequently to treat arthritic hands, wrists, knees, ankles, and feet. Orthoses should be custom-fitted by a physical or occupational therapist. Another potentially helpful aid is compression gloves. Two studies on the overnight use of compression gloves (close-fitting nylonspandex gloves) concluded that the gloves reduced pain and stiffness in people with RA in the fingers. Other possibilities for symptom relief include:

- Transcutaneous nerve stimulation (TENS) -- small studies show that at 70Hz, TENS, a technique used by many physical therapists, may provide short-term pain relief for people with RA.
- Magnetic devices -- devices employing static magnetic fields may help reduce pain
  - Heat and cold applications -- some people find these applications comforting; may reduce pain

#### Homeopathy

- A topical homeopathic gel containing comfrey (Symphytum officinale), poison ivy (Rhus toxicodendron), and marsh-tea (Ledum palustre)
- A combination homeopathic preparation containing R. toxicodendron, Arnica Montana (arnica), Solanum dulcamara

(climbing nightshade), Sanguinarra Canadensis (bloodroot), and Sulphur

 A liquid homeopathic preparation containing R. toxicodendron, Causticum (potassium hydrate), and Lac vaccinum (cow's milk).

#### Mind/Body Medicine

Chronic pain and disability can make daily functioning difficult. A holistic approach to care may positively affect both lifestyle and how feel overall. Many people report that relaxation techniques, such as guided imagery and meditation, are an important part of general care and help to alleviate pain and other symptoms of RA.

#### Ayurveda/Siddha

### Yoga

This ancient Indian practice is well known for its physical, psychological, emotional, and spiritual benefits and is recommended in the West to relieve musculoskeletal symptoms. In one small study, men and women with RA had improved grip strength in their hands after practicing yoga for only 15 days. Women in this study showed greater improvements than men. Certain yoga "asanas" (postures) strengthen the quadriceps and emphasize stretching. People with arthritis should begin asanas slowly and they should be performed only after a warm up. Yoga is best performed under the careful guidance of a reputable instructor.

### **Herbal Remedies**

An Ayurvedic combination containing the following herbs significantly reduced pain and disability in people with RA:

- Winter cherry (Withania somnifera)
- Boswellia (Boswellia serrata)

• Turmeric (Curcuma longa)

Potential side effects from these herbs include nausea, dermatitis, and stomach pain.

### Traditional Chinese Medicine Tai Chi

This gentle exercise program practiced in China for centuries has been shown to produce a number of benefits, including the following:

- Improved fitness
- Increased muscular strength
- Enhanced flexibility
- Reduced percentage of body fat

 Diminished risk of falls in the elderly

In a trial of people ranging in age from 49 to 81 with another type of arthritis, namely osteoarthritis, of the knee or hip, those who practiced tai chi twice a week for 3 months showed significant improvement compared to those in the control group in the following areas:

- Overall sense of quality of life
- Diminished feelings of stress/tension
- Increased satisfaction with general health
- Decreased fatigue
- Easier self management of arthritis symptoms

These benefits are likely to apply to individuals with RA as well.

#### Other Considerations Pregnancy

Borage seed oil, and possibly other sources of gamma-linolenic acid (GLA), should not be used during pregnancy because they may be harmful to the fetus and induce early labor. Pregnant or breastfeeding women should also not take goldenrod.

#### Warnings and Precautions

Omega-6 fatty acid supplements should not be used if you have a seizure disorder because there have been reports of these inducing seizures. Stinging nettle may enhance the effect of NSAIDs. Although the combination of stinging nettle and NSAIDs may be beneficial for the treatment of arthritic conditions, a knowledgeable physician should be consulted before adding this herb to an existing medication regimen.

**Prognosis and Complications** 

RA is associated with the following joint-related complications:

- Deformities -- these can result from cartilage destruction, bone erosions, and tendon inflammation and tears; such deformities can interfere considerably with even ordinary, daily tasks.
- RA involving the neck called the cervical spine) -- can be lifethreatening if these neck joints become unstable

RA is also associated with several complications that do not involve the joints. These include:

- Rheumatoid nodules -- painless, hard, round or oval masses that appear under the skin, usually on pressure points, such as the elbow or Achilles tendon. Occasionally, they appear in the eye where they sometimes cause inflammation. If they occur in the lungs, inflammation of the lining of the lung (called pleuritis) may occur, causing shortness of breath.
- Anemia and other blood abnormalities – anemia may occur due to failure of the bone marrow to produce enough new red cells to make up for the lost ones. Iron supplements will not usually help this condition because iron utilization in the body becomes impaired.
- Rheumatoid vasculitis
   (inflammation of the blood vessels)
   -- a serious, sometimes life threatening, complication. It can
   lead to open sores (ulcers) on the
   skin that may become infected,
   bleeding stomach ulcers, and
   neuropathies (nerve problems
   causing pain, numbness or tingling).
   Vasculitis may also affect the brain,
   and heart causing strokes, heart
   attacks, or heart failure.
- Other Heart complications also caused by inflammation including inflammation of the outer lining of the heart (called pericarditis) and possibly the heart muscle (called myocarditis). Both of these conditions can lead to congestive heart failure characterized by shortness of breath and fluid accumulation in the lung.
- Lung complications -- can be caused by the growth of fibrous tissue in the lungs or by inflammation of the lining of the lung (pleuritis). Pulmonary nodules, as described earlier, can also develop.
- Eye complications -- include inflammation of various parts of the eye.

The course of the disease varies between individuals. People with a certain antibody

in the blood (rheumatoid factor) and/or nodules (small swellings) under the skin seem to have more severe disease. People who develop RA at younger ages also tend to have faster disease progression. Remission is most likely to occur in the first year and then likelihood decreases over time. Ten to 15 years after the initial diagnosis, about 20% of people will have

had remission and most people will still be able to look after themselves. Although complications may shorten the life expectancy of people with RA, treatment is constantly improving and the occurrence of severe disability and life-threatening complications appears to be decreasing.

# 136.Roseola

Roseola is mainly a childhood disease. Almost all of the cases of roseola occur in the first two or three years of life. Roseola begins with a high fever, usually followed by a rash.

### Signs and Symptoms

- Sudden high fever (103° to 106° F), which usually lasts three to four days. Your child will most likely remain alert in spite of the fever.
- Rash appears as the fever goes away and lasts three to four days. It may look like measles or rubella. There are rose-colored bumps 2 to 3 mm in diameter. The rash usually appears first on the trunk of the body. It may spread to the neck, arms, and legs but rarely to the face.
- Seizures happen in 5 to 35 percent of all cases of roseola. They will not cause brain damage, and they usually go away when the fever goes down. Seizures may also occur without the rash.
- Breathing problems, ear infections, and diarrhea occur in about half the cases.

### What Causes It?

Roseola is caused by the human herpesvirus 6 (HHV-6). It is still unknown how the disease is spread but it may be present in saliva. The incubation period is 5 to 15 days.

#### What to be done

Child's physician may take blood to check for other conditions, complications and talk about how to take care of child's roseola at home.

# Treatment Options Drug Therapies

- Drugs such as acetaminophen lower fever. They also can reduce the discomforts and aches related to fever. Acetaminophen can cause liver damage if you take it for long periods or in high doses. Do not use aspirin in the setting of roseola because it may cause a very serious illness called Reye's syndrome.
- Make sure child drinks a lot of fluids to prevent dehydration.
- Sedatives, such as diazepam, may reduce the chance of seizure.
- Phenobarbital is sometimes given for seizures.

### Complementary and Alternative Therapies Nutrition

Immune stimulating: vitamin C (250 to 500 mg two times a day) and zinc (30 to 60 mg per day).

#### Herbs

- Catnip (Nepeta cataria) lowers fever and reduces spasms.
- Peppermint (Mentha piperita)
   reduces gas, has been historically
   used for colds and fevers
- Elder (Sambucus nigra) calms your child and reduces fever.
- Fennel (Foeniculum vulgare) for an upset stomach and upper respiratory irritation; calming
- Yarrow (Achillea millefolium) reduces fever, helps appetite loss
- Chamomile (Matricaria recutita) stimulates immune system, is a relaxant (to allow for sleep)

Mix four to six of the above and drink as a tea, 1 cup three to four times per day or as a

tincture, 60 drops three to four times per day. In addition, a strong tea (2 tbsp. herb) can be added to a bath to keep fever down. Garlic/ginger tea—one to three cloves garlic (Allium sativum) and one to three slices of fresh ginger (Zingiber officinale)—may be drunk to stimulate the immune system and prevent upper respiratory infections. Lemon and a sweetener may be added for flavor. Do not give honey to children under 2 years old.

#### Homeopathy

- Aconitum for individuals who have a sudden high fever, especially when the fever is accompanied by restless anxiety; this remedy is best when used very early in disease, before a rash appears
- Belladonna for individuals who have a sudden high fever that rises during the night and is accompanied by flushed face and red lips; the skin tends to be hot to the touch, but extremities feel cold; children for whom this remedy is appropriate tend to be very agitated and may even be delirious
- Pulsatilla for individuals who have fever and chills that are worse in warm rooms but better in fresh air; symptoms tend to be less

intense than for the other remedies listed

### Physical Medicine

Warming socks. Wet cotton socks with cold water, wring them out, and put on the feet. Put on dry wool socks over the cotton socks and go to bed. This treatment, while uncomfortable at first, will help disperse a fever and allow for a good night's sleep.

Wet sheet wrap. Wrap the child in a cotton sheet that is wet with cold water and wrung out. Then wrap the child in another blanket. Especially in infants, this will disperse a fever and allow a restful sleep.

#### Acupuncture

Acupressure for children may be quite calming and help reduce the fever.

#### Massage

Gentle massage may relieve discomfort. A foot massage may help relax the child. Some children will not want to be touched. however.

#### Follow up

Most children get well within about a week with no problems.

#### **Special Considerations**

Avoiding infected children is the only prevention. There is no vaccine for roseola.

### 137. Roundworms; Ascariasis; Guinea Worm Disease; Hookworm; Loiasis; Lymphatic Filariasis; Parasitic Infection, Roundworms; Pinworm; River Blindness; Threadworm; Trichinosis; Visceral Larva Migrans; Whipworm

Roundworms, or nematodes, are parasites that can infect humans, usually by residing in the intestines. Several different species of worm can cause infection, and worms can range in length from millimeter to 1 meter. As with other parasitic diseases, roundworm infections are more common in warm, tropical climates than in cooler, temperate areas of the world. The most common roundworm infection is Ascariasis (caused by the worm Ascaris lumbricoides), which affects as many as 1 billion people worldwide.

Signs and Symptoms

The signs and symptoms of roundworm infection include:

- Passage of worm by mouth, rectum, or, with certain species (particularly dracun culosis), through skin ulcers; worm eggs may also be passed in feces
- Abdominal cramps
- Loss of appetite
- Diarrhea or constipation
- Flatulence
- Weight loss
- Anemia •
- Cough, chest pain, or difficultly Acres . breathing breathing breathing
- Nausea and vomiting 3111013
- Fever Marie 5
  - Skin lesions, rashes, hives, itching

- Muscle aches
- Swelling of lymph nodes
- Visual impairment with certain species (particularly onchocerciasis)

#### Causes

Many roundworm parasitic diseases result from a lack of appropriate personal hygiene and sanitation measures. Most roundworms or their eggs are found in the soil and can be picked up on the hands and transferred to the mouth or can enter through the skin. The various roundworm infections include:

#### **Ascariasis**

Ascariasis is an infection caused by the roundworm *Ascaris lumbricoides*. Infection occurs when an individual consumes food or drink contaminated with fecal matter that contains mature worm eggs. Adult worms can reside in the small intestine and produce eggs for a year or more.

## Whipworm (trichuriasis)

A whipworm infection occurs when an individual consumes food or drink contaminated with fecal matter containing the roundworm *Trichuris trichiura*. After eggs are ingested, larvae hatch in the small intestine and mature in the large intestine.

### Hookworm (ancylostomiasis)

A hookworm infection occurs when larvae of the roundworms Ancylostoma duodenale or Necator americanus penetrate human skin, making their way through the lungs to the small intestine, where they attach and mature into adults, laying more eggs. Children are particularly susceptible to this kind of infection. Once infected, children become weak and experience delayed growth patterns. These roundworms infect about 25% of the world's population.

# Threadworm (strongyloidiasis)

Threadworm is an infection caused by the roundworm Strongyloides stercorali. This type of roundworm infects humans in the same way as Ancylostoma duodenale. About half of the population of some African countries has been infected with Strongyloides stercorali.

### Pinworm (enterobiasis)

A pinworm infection occurs when an individual consumes food or drink contaminated with fecal matter containing the roundworm *Enterobius vermicularis*. After being ingested, eggs hatch in the small

intestine and adult worms ultimately inhabit the large intestine.

# Visceral larva migrans, or VLM (toxocariasis)

VLM is an infection caused by the roundworms *Toxocara canis*, *Toxocara cati*, or *Baylisascaris procyonis*. These parasites ordinarily infect dogs, cats, and raccoons, respectively, but a human can become infected by consuming soil contaminated by infected animal feces. While the larvae do not mature to adults in humans, they penetrate the intestinal wall and migrate to various parts of the body, particularly the lungs and liver.

### Trichinosis (trichiniasis)

Trichinosis an infection caused by the roundworm *Trichinella spiralis*. These larvae live in pigs and other wild carnivores, such as bears, but humans can become infected with *Trichinella spiralis* when they eat such meat (particularly pork) that is undercooked. The larvae mature in small intestines and migrate to muscle cells where they can live for months or years.

# Guinea worm disease (dracunculosis)

Humans can become infected with Guinea worm disease when they consume drinking water contaminated with the roundworm *Dracunculus medinensis*. Larvae penetrate the intestinal wall, where they mature and migrate to connective tissues. This type of roundworm infects 10 to 40 million people annually worldwide, primarily in the Indian subcontinent, West and Central Africa, and some Middle Eastern countries.

# Lymphatic filariasis

A lymphatic filariasis infection occurs when a mosquito containing the roundworms Wucheria bancrofti, Brugia malayi, or Brugia timori bites an individual. Over a period of 6 to 12 months, adult worms mature and live in human lymph vessels and nodes and can eventually circulate through the blood. About 90 million people worldwide have been infected with these roundworms.

### Risk Factors

The risk factors for roundworm infection include:

- Living in or visiting a warm, tropical climate
- Poor sanitation
- Poor personal hygiene

- Crowded conditions, such as day care or institutional settings
- Frequent practice of anal intercourse
- Compromised immune system
- Malnutrition
- Eating undercooked meat from carnivorous animals
- Eating dirt or clay (children and especially boys tend to become infected this way)
- Contact with animal feces
- Multiple insect bites

#### Diagnosis

Steps in diagnosis may include:

- Physical exam
- Stool and urine samples identify microorganisms in the stool and urine
- Blood tests detect infection in the blood
- Muscle and/or skin biopsy reveals infections that affect the muscle and/or skin
- Ultrasound reveals worms in lymph nodes
- X ray reveals large worms in abdominal region
- Sampling of contents of small intestine may reveal presence of roundworms
- Tape test used particularly for pinworm infections; physician applies cellulose acetate tape to the region, skin the anal around tape, and removes the examines it for pinworm under a microscope

### **Preventive Care**

The steps to preventing roundworm infection include:

- Good personal hygiene (such as washing hands and avoiding contact with fecal matter)
- Avoid uncooked or unwashed fruits and vegetables in areas where sanitation is poor
- Avoid mosquito or fly-infested areas, unfiltered water, and direct skin contact with soil in areas where roundworm infections are prevalent
- Wear protective clothing and use insect repellant

- Cook or freeze meat thoroughly
- Keep children away from pet feces
- Consult a veterinarian about deworming pets
- Public health measures in areas where roundworm infections are prevalent include improving general sanitation, especially sewage disposal, and reducing mosquito and fly populations

#### **Treatment Approach**

The use of antiparasitic medications is the primary therapy for roundworm infections; the medication prescribed depends on the specific roundworm identified. Surgical procedures may be necessary under certain circumstances; such procedures are not always readily available, however, in areas where roundworm infections are prevalent. Roundworm infections can inflame the lining of the gut and limit the absorption of and/or compete with many essential nutrients, including vitamins A and B6. Vitamin A deficiencies are believed to increase the risk of parasitic infections, so vitamin A supplementation may help prevent or reduce symptoms associated with roundworm infections. In addition, some herbal remedies, particularly fig, have been shown to limit roundworm egg production or destroy roundworms altogether.

#### Medications

Antiparasitic drugs and other medications used to treat roundworm infections and certain complications include:

- Mebendazole for ascariasis, whipworm, hookworm, and pinworm
- Albendazole for ascariasis, whipworm, and hookworm
  - Thiabendazole for threadworm
  - Pyrantel pamoate for ascariasis, hookworm, and pinworm
  - Prednisone for severe VLM and at certain times in cases of trichinosis
  - Diethylcarbamazine (DEC) for lymphatic filariasis
  - Ivermectin for river blindness;
     may also be effective for threadworm
  - Oral iron if anemia is present
  - Analgesics, anti-inflammatories, antihistamines, and antibiotics – for

relief of symptoms or to treat bacterial infection

#### **Surgery and Other Procedures**

Surgical removal of worms from Guinea worm disease and river blindness are possible but are usually not available in many areas where roundworm infection is prevalent. Surgery may be necessary in some cases when the infection causes obstructions in the intestines or other organs. To alleviate soft tissue swelling from lymphatic filariasis, measures such as bandaging, physical therapy, careful skin care, as well as drainage of excess fluids may be taken.

# Nutrition and Dietary Supplements Vitamin A

Vitamin A deficiency may be associated with roundworm infection. Parasites may deplete stores of vitamin A, leaving the infected individual with inadequate levels to fight off infection. Parasites may impair an individual's ability to absorb fat, thereby interfering with the intestinal absorption of fat-soluble vitamins such as vitamin A.

### Vitamin B6 (Pyridoxine)

Vitamin B6-deficient rats recover from trichinosis significantly slower than rats with normal.

#### Herbs

### Fig (Ficus glabrata)

Studies of individuals with roundworm infections, including ascariasis, threadworm, whipworm, and hookworm, have suggested that daily doses of *Ficus glabrata* (an extract from a species of fig tree) may reduce roundworm egg production by up to 85 percent.

# Andrographis root (Andrographis paniculata)

Animal studies indicate that this herb may reduce the presence of Wucheria bancrofti, Brugia malayi, or Brugia timori (lymphatic filariasis infections) by 84% to 93% in infected dogs. The safety and effectiveness of this herb has yet to be investigated in humans, however.

# Garlic (Allium sativum)

Laboratory studies suggest that large quantities of fresh, raw garlic may have antiparasitic properties against the roundworm, Ascaris lumbricoides; this herbal remedy has not yet been tested clinically in humans.

# Wormseed (Chenopodium ambrosioides)

This herb is used throughout the world as an effective antiparasitic agent against hookworm and whipworm.

### Wormwood (Artemisia absinthium)

Various species of wormwood are reported to have antiparasitic properties and have been used traditionally to treat parasites. The safety and efficacy of this herb, however, has not been established in clinical trials.

#### Turmeric (Curcuma longa)

Curcuminoids, the active components of turmeric, may work together with wormwood to reduce the destructive activity of parasites. Clinical trials with humans are warranted.

### Rangoon creeper (Quisqualis indica)

The seeds of this tropical vine are frequently used throughout Southeast Asia for treating infections associated with roundworms, particularly ascariasis and pinworm. Results of clinical studies suggest that this herb may eliminate between 30% and 86% roundworms in infected individuals. Other herbs with a substantial history of treating roundworms include pumpkin seeds and husks (Curcubita pepo), Punica granatum (Pomegranate bark), and quassia (Picraena excelsa). The clinical safety effectiveness of these herbs have not been scientifically studied, however.

# **Other Considerations Pregnancy**

Most antiparasitic drugs used to treat roundworm infection should not be used during pregnancy.

## **Warnings and Precautions**

- Ivermectin this medication, sometimes used to treat roundworm infections, should not be given to nursing mothers, the severely ill, children under 5 years old, or those weighing less than 15 kg (6.8 lb).
- Antioxidant supplements some antioxidant supplements, such as selenium and vitamins C and E, should be avoided the during treatment of roundworms. In theory, these antioxidants may enhance the activity of roundworms. one study, the effectiveness of medication, mebendazole, appeared diminished when supplements were taken at the same time.

# **Prognosis and Complications**

There are several possible complications associated with roundworm infections. They include:

- Intestinal obstruction (caused by the roundworm itself)
- Inflammation of the intestines or gall bladder
- Kidney disease
- Pus accumulation in the liver
- Inflammation of the pancreas
- Appendicitis

- Peritonitis (inflammation of the sac surrounding the abdomen; generally with fluid accumulation)
- Encephalopathy (disorder of the brain)
- Cardiomyopathy (disease of the cardiac muscle of the heart)
- Malnutrition
- Distorted, abnormal growth of the skin and surrounding soft tissue
- Blindness (from onchocerciasis)

### 138. Rubella; German measles

Rubella, also known as German measles or three-day measles, is an acute viral infection. Before a rubella vaccine became available in 1969, there were outbreaks of the disease every six to nine years. Now rubella is rare in locations where vaccination is standard practice.

#### What Causes It?

A virus causes rubella. It can be spread in airborne droplets, such as from a cough or sneeze, from an infected person.

#### Who's Most At Risk?

These factors increase the risk for rubella:

- Lack of immunization
- A nonimmune person coming in close contact with infants who have congenital rubella syndrome (such as in a hospital or day-care setting)
- A nonimmune person coming in close contact with large numbers of people from countries that don't routinely vaccinate against rubella

## Signs and Symptoms

The most distinctive sign of rubella is swollen lymph nodes behind the ear, in the neck, and at the back of the head. In older children and adults, it is more common to have a low-grade fever, malaise (feeling unwell), and loss of appetite, swollen glands, and upper respiratory infection for one to five days before the onset of full-blown disease.

Other signs and symptoms include:

- Arthritis and joint pain; more common in older girls and women and may persist up to weeks or, rarely, months
- Conjunctivitis (inflammation of the membrane around the eye)

- Pain and inflammation of the testes
- Mild itching

#### What to be done

Physicians will perform an exam to look for common signs and symptoms, and may perform blood tests or culture a sample of fluid from the nose or throat to check for the rubella virus.

### **Treatment Options**

#### Prevention

The rubella vaccine causes immunity in 90% to 95% of those who receive it. Children should receive two doses (usually as part of the combination measles-mumpsrubella [MMR] vaccine) at least 4 weeks apart. Controversy surrounds the MMR vaccine because of concern that it may be linked to disorders such as autism and inflammatory bowel disease. Rubella vaccine should not be given to anyone who:

- Has a history of severe allergic reaction to a previous rubella or other vaccine
- Is pregnant or planning to become pregnant
- Has a deficient or suppressed immune system
- Has a moderate to severe illness
- Has received antibody-containing blood products within the previous three months.

#### **Treatment Plan**

There is no specific therapy to fight the rubella virus

#### **Drug Therapies**

 Acetaminophen or ibuprofen can be taken to reduce fever.

- A pain reliever and antiinflammatory, such as ibuprofen, can be used for arthritis or joint pain.
- Aspirin or other medicines that contain salicylates should not be used in children who have certain viral illnesses, such as rubella.

# Complementary and Alternative Therapies

Due to the controversy surrounding routine MMR vaccination, some people may seek alternative treatments in place of vaccination. Some CAM approaches may help alleviate symptoms of rubella.

#### Nutrition

- Vitamin A
- Vitamin C
- Zinc

In addition, a laboratory study found that honey helped fight the rubella virus in test tubes; however, it is not clear what ingredient in the honey is responsible for this anti-viral activity nor is it known whether this same benefit would be conferred to people.

#### Herbs

To treat viruses in general, herbalists may recommend remedies that stimulate the immune system and that have fever-reducing and anti-infectious properties; in addition, agents that improve symptoms of rubella may be considered. These may include:

- Willow bark (Salix alba, S. purpurea, S. fragilis) to reduce fever
- Calendula flower (Calendula officinalis) for rash
- Hay flower (*Poa* spp.) used externally for joint pain

#### Homeopathy

- Aconitum for individuals who experience a sudden fever, rash, and thirst
- Belladonna for rubella that appears suddenly, is associated with high fever, flushed face and red lips, and heat that radiates from the skin; this remedy is most appropriate for individuals who perspire minimally and may experience strange dreams
- Ferrum phosphoricum this remedy is used early in the illness

- when symptoms are not specific and mild to moderate fever is present; children for whom this remedy is appropriate tend to be tired with a mildly flushed face
- Pulsatilla for individuals with fever and chills that are worse in warm rooms and better in fresh air; symptoms tend to be less intense than for the other remedies listed

#### Acupuncture

Electroacupuncture successfully treated two cases of visual and hearing impairments linked to congenital rubella syndrome. Acupuncture may also help relieve arthritis pain.

#### Massage

Therapeutic massage may help relieve arthritis pain.

### **Prognosis/Possible Complications**

Most people who have rubella recover completely without permanent side effects and are immune to rubella afterward. Complications are more common in adults than children and may include:

- Arthritis or joint pain—Occurs almost exclusively in women; fingers, wrists, and knees tend to be affected. This develops along with rash and may take several weeks to resolve.
- Encephalitis (inflammation of the brain)—More common in adults (especially in women) than in children. The severity can vary greatly. Up to 50% of people affected by this complication may die from it.
- Internal bleeding, including in the skin, gastrointestinal tract, brain, or kidneys—More common in children than in adults. This may last for days or, rarely, months.
- Inflammation of the testicles, nerves, and brain
- Pregnancy complications—Rubella infection during pregnancy can lead to miscarriage or stillbirth, as well as to congenital rubella syndrome in the child (see section entitled Special Considerations).

# Special Considerations

Temporary effects of congenital rubella syndrome may include:

- Slow growth in the womb
- Low birth weight
- Bleeding disorder 0
- Overgrowth of the liver and spleen
- Anemia
- Jaundice (yellowish coloration of the skin, tissues, and body fluids)
- Pneumonia

Permanent effects of congenital rubella syndrome may include:

Deafness

- Heart defects
- Glaucoma and other vision problems
- Mental retardation
- Behavior disorder
- Diabetes mellitus
- Thyroid disease
- Growth hormone deficiency

#### 139.Sarcoidosis

Sarcoidosis is a condition characterized by the presence of granulomas - small beadlike patches of inflamed cells that often appear in the lungs and adjacent lymph nodes. Sarcoidosis can also affect other tissues of the body including the muscles, eyes, and skin. While most individuals with sarcoidosis have symptoms at all, sarcoidosis can cause longterm organ damage, such as the abnormal formation of fiber-like scar tissue in the lung. This actually distorts the structure of the lungs and can interfere with breathing. Those who have a variation of the condition, called Lofgren's syndrome, may have symptoms that include swollen lymph nodes, fever, painful, reddened nodules, and joint pain.

Signs and Symptoms

Many individuals with sarcoidosis have no symptoms at all. Some individuals with pulmonary sarcoidosis (lung) may experience and following signs the symptoms:

- Fatigue and weakness
- Weight loss
- Shortness of breath or chest pain
- Dry cough
- Enlarged lymph nodes around the lungs

When sarcoidosis affects areas of the body other than the lungs, symptoms can include:

- Enlarged lymph nodes
- Red-purple inflamed areas on the legs
- Scaly rash
- Fever
- Swelling and pain in the ankles and knees

- Infections of the eye, including conjunctivitis
- Facial paralysis
- Enlarged or inflamed liver 0
- Kidney stones
- Seizures

#### Causes

Researchers have proposed that condition may be inherited, caused by an infection, or caused by inhaled allergens or toxins found in the environment.

#### Risk Factors

Sarcoidosis is found throughout the world within almost all races and ages and in both sexes, however it is most common among the following:

- Individuals in their 30s or 40s
- Females

#### Diagnosis

Although many individuals with sarcoidosis experience no symptoms of the condition, the following tests may help a physician diagnose the condition:

- Chest X ray
- Biopsy
- Blood tests
- CT scan, MRI, or other imaging
- Eye exam
- ECG (electrocardiogram)

#### **Treatment Approach**

relief and prevention Symptom of complications are often provided medications such as corticosteroids, which reduce swelling, rashes, pain, fever and lung problems. Melatonin and homeopathy may provide symptom relief and improve general well being.

#### Lifestyle

Eating a diet low in calcium and vitamin D may relieve or help prevent two of the complications of sarcoidosis, hypercalcemia and kidney disease. A physician can provide advice on how to cut calcium out of the diet. Avoiding sunlight, which is converted to vitamin D by the body, is also recommended. Quitting smoking can ease lung symptoms.

#### Medications

Corticosteroids such as prednisone, prescribed by a physician, are the most effective medications for reducing inflammation associated with sarcoidosis. Oral corticosteroids can have some serious side effects if taken in high doses for long periods, including high blood pressure, diabetes, peptic ulcers, tuberculosis, or hirsutism. Other medications for sarcoidosis can include:

- Methotrexate for severe sarcoidosis; may cause liver damage
- Antimalarial drugs such as hydroxychloroquine – for disfiguration of the skin; may be toxic to the eyes

### Surgery and Other Procedures

Surgery, such as a lung or heart transplant, is only necessary in extreme cases.

# Nutrition and Dietary Supplements

Melatonin: Preliminary studies suggest that the brain hormone melatonin may be an effective alternative. In one study, individuals with sarcoidosis who did not respond to corticosteroid therapy experienced the following improvements after taking 20 mg of melatonin per day for 4 to 12 months:

Improved breathing

- Decreased lymph node swelling
- Normalization of blood tests (indicate improvement in the condition)

### Homeopathy

A few case reports suggest that homeopathic remedies may improve the general well being of individuals with sarcoidosis.

- Tuberculinum bovinum
- Beryllium

Other homeopathic remedies that have been used clinically for the condition are as follows:

- Carcinosin
- Euphrasia
- Graphites
- Leuticum (Syphilinum)
- Bacillinum
- Sepia
- Phosphorus
- Arsenicum album

## **Other Considerations Pregnancy**

Sarcoidosis does not affect fertility. Symptoms may improve in up to 65% of pregnant women who once had the condition, while 5% may experience worsening of symptoms. Postpartum symptom flare-ups may also occur within the first 6 months. Pregnant women with sarcoidosis should avoid exposure to X rays and toxic medications such as methotrexate.

# **Prognosis and Complications**

Complications from sarcoidosis usually occur in only the most serious cases, and can include heart, kidney, and lung damage. Ulcers, diabetes, high blood pressure, and infections, such as tuberculosis, may result from long-term use of corticosteroids.

# 140.Scleroderma

Scleroderma is a connective-tissue disease that causes a progressive build up of tough scar-like tissue in the skin and internal organs. Localized scleroderma usually affects only the skin on the hands and face. Systemic scleroderma, however, affects the connective tissue in many parts of the body, including the skin, the esophagus, gastrointestinal tract, lungs, kidneys, heart, and other internal organs. It

is unusual for localized scleroderma to progress to the systemic form.

# Signs and Symptoms

Symptoms of scleroderma may include one or more of the following:

- Raynaud's phenomenon (abnormal sensitivity to cold in the hands or feet)
- Swelling of the fingers, hands, forearms, feet, lower legs, and face

- Thickening, hardening, and discoloration of the skin
- Ulcers or lesions on fingers, face, tongue, and inner lining of the cheek
- Joint pain, swelling, and stiffness (especially in the fingers and knees)
- Carpal tunnel syndrome
- Shortness of breath, cough
- Dry eyes
- Sexual dysfunction
- Digestive and gastrointestinal problems including difficulty swallowing, bloating, and abdominal pain

#### Causes

Scleroderma results from an overproduction of collagen, the primary connective tissue protein in the body. It has been associated with a number of industrial and pharmaceutical chemicals including:

- Silica dust
- Some plastic materials, such as epoxy resins and vinyl chloride
- Aromatic hydrocarbons
- L-tryptophan (synthetic supplement)
- Rapeseed oil

#### Risk Factors

- Gender approximately 3 times more women than men develop the disease
- Age scleroderma is most common among individuals between the ages of 20 and 50; it is relatively rare in children
- Race/Ethnicity young women of African ancestry and native Americans of the Choctaw tribe of Oklahoma have a high prevalence of the disease

### Diagnosis

- Blood tests may detect elevated levels of antibodies found in the majority of individuals with scleroderma
- Skin biopsy samples of skin may be taken to identify abnormalities suggestive of scleroderma
- Chest X ray and/or pulmonary function test – may detect lung damage or altered lung capacity

 MRI and/or CT scan – often detect early signs of damage to the muscles and internal organs

#### **Preventive Care**

It is important for an individual with scleroderma to avoid developing infections, so administer the following:

- Pneumococcal pneumonia vaccine
- Annual flu vaccine

#### **Treatment Approach**

Biofeedback successfully controls the temperature of the hands and feet of those with Raynaud's phenomenon. Studies also suggest that acupuncture may raise the temperature and improve circulation in the hands and feet. Finally, simple lifestyle changes may also improve an individual's quality of life.

#### Lifestyle

While lifestyle adjustments will not stop the progression of scleroderma, these simple measures may enhance an individual's quality of life:

- Eating small, frequent meals may reduce gastrointestinal problems
- Maintaining an active lifestyle may preserve muscle
  - Avoiding smoke, exposure to cold, and stress – may prevent blood vessel spasms that diminish circulation
  - Applying soothing skin creams to affected areas – may reduce pain, swelling, and stiffness

#### Medications

Localized scleroderma often is treated with topical therapies such as moisturizers or topical corticosteroids. Oral medications may also be used to halt the progression of localized scleroderma if it involves a large area of the body, such as an entire arm or leg. Systemic scleroderma may be treated with medications that improve circulation, promote gastrointestinal function, preserve kidney function, and control high blood pressure. Some medications a physician may prescribe for scleroderma include:

- Penicillamine can reduce skin thickening and delay spread of damage to internal organs; has relatively high incidence of adverse reactions.
- Pentoxifylline may improve circulation

- Immunosuppressant medications (such as cyclophosphamide) - often used for patients with lifethreatening form of the disease; potent medications that damage cells' genetic information; may cause significant side effects
- Anti-inflammatory medications (such as aspirin, ibuprofen, and corticosteroids) - may reduce inflammation and swelling
- Calcium-channel blockers (such as nifedipine and diltiazem) - often used to treat Raynaud's phenomenon
- Antibiotics prevent overgrowth of bacteria in the intestines and improve digestive processes
- ACE inhibitors (such as captopril) may improve hypertension, prevent kidney damage, and dilate blood vessels

### **Surgery and Other Procedures**

When symptoms of scleroderma become very severe, physicians may recommend the following procedures:

- Surgery to repair damage to the stomach or intestinal walls
- Amputation of severely diseased and infected fingers or toes
- · Kidney, heart, and/or lung transplantation (in rare cases)

# **Nutrition and Dietary Supplements**

Many individuals with scleroderma develop gastrointestinal problems and consequently reduce the amount of food they consume and nutrients they absorb. To prevent malnutrition, clinicians may recommend daily multivitamins that contain the following: Vitamin E

- Vitamin C
- Carotene
  - Linoleic acid
  - . Selenium

#### Herbs

# Danshen root (Salvia miltiorrhizae)

This herb is currently used in China to treat circulatory problems and kidney failure. Danshen root prevents the formation of fibrous tissue, but further research is required before it can be proven effective for the treatment of scleroderma.

#### Keishi-bukuryo-gan

Laboratory studies indicate that this Chinese herbal mixture may inhibit collagen synthesis. The active ingredients in this herbal mixture include Ceylon cinnamon (Cinnamomum verum), Chinese cinnamon bark (Cinnamomum aromaticum) traditionally for bloating and heartburn, and peony root (Paeonia lactiflora) used for arthritis as well as gastrointestinal, heart, and circulatory problems.

### Gotu Kola (Centella asiatica)

Clinical trials suggest that low doses of gotu kola may decrease hardening of the skin associated with scleroderma, reduce joint pain and improve finger mobility. Although they haven't been scientifically examined the treatment of scleroderma specifically, certain herbs. including bromelain (Ananas comosus), hawthorn berry (Crataegus monogyna), and horse chestnut (Aesculus hippocastanum), may be beneficial in treating connective tissue disorders in general.

#### Acupuncture

A few studies of patients with systemic scleroderma indicate that acupuncture may improve circulation in the hands and fingers, mend fingertip ulcers, and possibly reduce the formation of fibrous tissue.

# Massage and Physical Therapy

Research suggests that massage may be useful in improving circulation preventing muscle distortion.

# Mind/Body Medicine

Biofeedback appears to successfully control the temperature in the hands and feet of those with Raynaud's phenomenon, a symptom often found with those scleroderma.

#### Other Considerations Prognosis and Complications

Possible complications that may result from scleroderma include the following:

- Joint damage
- Damage to smooth muscles in the gastrointestinal tract
- Malnutrition
- Formation of fibrous tissue in the heart muscle; may lead permanent damage and/or degradation.
  - Kidney damage and/or failure

Formation of fibrous tissue in the thyroid gland

The prognosis for those with scleroderma is highly variable and depends primarily on the form of the disease. For example:

- The CREST syndrome tends to progress slowly and remains relatively benign for decades. The 10-year survival rate for those with CREST is 75%.
- Those with localized scleroderma also have a 10-year survival rate of 75%.
- Systemic scleroderma tends to progress faster in men and in those who are older at the onset of the disease. The 10-year survival rate for those with systemic scleroderma is 55%. If damage spreads to the heart, lung, or kidneys early in the course of the disease, prognosis is generally poor.
- Spontaneous remissions from scleroderma have also been reported, with symptoms of the disease resolving in the reverse order that they appeared.

## 141.Seizures Disorders; Epilepsy

Seizures occur when nerve cells in the body misfire. Types of seizures vary. Recurrent seizures from one of many chronic processes are considered epilepsy. However, seizures are not considered to be epilepsy if they occur only once or are correctable.

## Signs and Symptoms

- Aura, including lethargy, depression, irritability, involuntary jerks of limbs, abdominal pains, pale complexion, headache, constipation, or diarrhea
- Loss of consciousness
- Total body muscle spasms
- Temporary cessation of breathing
- Bluish color of skin and mucous membranes
- Dilated pupils that do not react to light
- Bowel or bladder incontinence
- Increased pulse and blood pressure
- Increased salivation and sweating
- Deep coma, post-seizure confusion, and deep sleep

## What Causes It?

- Central nervous system infection (bacterial meningitis, encephalitis)
- Drug toxicity or withdrawal (for example, alcohol or illicit drug use)
- Genetic mutations
- Head trauma
- Electrolyte or metabolic abnormalities

- Drugs that lower the seizure threshold
- High fevers
- Brain abnormalities (for example, tumors, stroke)
  - Low sugar and low calcium levels in the blood

#### What to be done

Precipitating events and risk factors are important factors to be discussed. It is also important to note how you felt before and after the seizure. Blood tests and an electroencephalogram (EEG) are needed to help in diagnosis.

## Treatment Options

The goal of therapy is to stop the seizures, to minimize adverse drug effects, to prevent recurrences, and to help you readjust to your home life and work environment after a seizure.

#### Drug Therapies

Prescribe medication to help control seizures

## Complementary and Alternative

Therapies
Some mild seizures may be controlled by alternative therapies.

#### Nutrition

Diet: a high-fat, low-protein, low-carbohydrate (ketogenic) diet may help control the frequency of seizures. Some studies have shown a connection with food allergies and seizures in children. Avoid alcohol, caffeine, and aspartame.

- Taurine (500 mg three times per day): amino acid that has been shown in studies to inhibit seizures
  - Folic acid (400 mg per day): depleted during seizures and in some people with seizures, although higher doses than 400 mcg may actually precipitate some seizures. Should be taken with B12
  - B12 (100 to 200 mg per day)
  - B6 (20 to 50 mg per kilogram of body weight): especially in children may help control seizures
  - Magnesium: 500 to 750 mg per day (should be in a 1:1 ratio in persons taking calcium) for normal muscle and nervous system function
  - Manganese (5 to 15 mg per day): depleted in people with epilepsy
  - Zinc (30 mg per day): may be depleted by some medications
  - Dimethylglycine (100 mg twice a day): may decrease medication requirements

#### Herbs

- Passionflower (Passiflora incarnata): to both prevent and treat seizures, may be effective without side effects, especially where stress is a precipitating factor. Dose is 30 drops three to four times per day.
- Skullcap (Scutellaria lateriflora):
   antispasmodic and calmative herb
- Valerian (Valeriana officinalis): spasmolytic, sedative

The above herbs may be used singly or in combination as 1-cup tea three times per day or 30 to 60 drops tincture three times per day. In addition, use milk thistle (Silybum marianum) to protect the liver from effects of medications (70 to 210 mg three times per day).

### Homeopathy

- Belladonna for seizures that occur in individuals with a high fever
- Causticum for individuals whose seizures may be triggered by receiving bad news or by feelings of sadness such as from grief; this remedy is most appropriate for individuals who tend to feel hopeless and fearful
- Cicuta for individuals who develop seizures after a head injury
- Cuprum metallicum for individuals whose seizures are accompanied by mental dullness; may be triggered by menstruation or vomiting

## **Physical Medicine**

Chiropractic, osteopathic, or naturopathic manipulation may be helpful, especially in children or for seizures after head trauma.

## Acupuncture

Acupuncture may be helpful with specific acupressure points that have been used to stop seizures.

## Follow up

Determining the best dosage or drug combinations is an inexact science; will monitor until seizures are under control.

# 142.Serum Sickness

Serum sickness results from a reaction to an antigen, a protein that the body recognizes as foreign. The classic example of a cause of serum sickness is an antiserum administered following snakebite to counter the poisonous venom. Today, the most common cause of serum sickness is the antibiotic penicillin. Serum sickness will usually develop within 7 to 10 days after initial exposure to the antigen; at times, however, the reaction does not develop until as long as three weeks later. With subsequent exposures, serum sickness tends

to develop more rapidly and only a very small amount of the substance may cause an intense response.

## Signs and Symptoms

- Skin lesions, possibly including bruise-like patches from bleeding into the skin; a faint red discoloration over the hands, fingers, feet, and toes before other lesions or a brighter rash erupt; hives
  - Joint pain

- Fever .
- Malaise (feeling unwell)
- Swollen lymph nodes
- Swelling, especially around the face and neck
- Wheezing
- Flushing
- Runny nose
- Rarely, low blood pressure, as with anaphylaxis
- Muscle pain
- Diarrhea, nausea, abdominal cramping

## What Causes It?

Penicillins are the most common cause of serum sickness. Other causes include:

- Other antibiotics; fluoxetine used for depression; barbiturates; a class of diuretics called thiazides; aspirincontaining products; propylthiouracil used for overactive thyroid; and hydantoins used for seizures.
- Influenza vaccine
- Snake venom antiserum
- Diphtheria and tetanus antisera; no longer happens generally because these are now prepared from human origin as opposed to foreign species as was done years ago
- Bee or wasp sting not common

#### Who's Most At Risk?

- A drug or antitoxin known to cause serum sickness is delivered by injection
- High quantities of snake venom antiserum are required
- If there has been past exposure to a drug or antitoxin known to cause serum sickness

## What to be done

A typical signs and symptoms and ask about recent exposure to any antiserum. Blood and urine tests and tests of skin with lesions may aid the diagnosis.

## **Treatment Options** Prevention

- If aware of a hypersensitivity to a particular drug or other agent, before you get any kind of injection.
- Perform skin tests to check for serum sensitivity before giving antiserum.

- Once hypersensitivity is identified, physician may use a method that desensitizes to the antiserum, at least temporarily.
- Because of their potential to cause serum sickness, serum from animals should be avoided unless there is no other treatment option.

### **Drug Therapies**

Doctors will typically prescribe antihistamines or analgesics for serum sickness. If symptoms don't respond to this they may treatment, prescribe corticosteroids, such as prednisone. In severe cases providers may resort to plasmapheresis—a procedure for removing blood, separating plasma from the blood, then replacing the blood along with plasma substitutes.

## Complementary and Alternative Therapies Nutrition

These include:

- Vitamin C
- L-methionine (an amino acid or protein building block obtained from dietary sources)
  - Choline (considered part of the vitamin B complex; found in meat and some vegetables)
  - Inositol (considered part of the vitamin B complex; found in fruits, vegetables, whole grains, and organ meats)

Omega-3 fatty acids are generally used to reduce inflammation; however, substances along with eicosapentanoic acid (EPA), should be avoided in the case of serum sickness because of a recent animal study showing increased levels of antigenantibody immune complexes following ingestion of fish oil. Increased circulation of immune complexes may worsen serum sickness.

#### Herbs

- Eleuthro root (Eleutherococcus senticosis), frequently marketed as ginseng-used for Siberian inflammatory conditions
- Ginkgo (Ginkgo biloba)-may decrease swelling
- (Glycyrrhiza root Licorice decrease glabra)-may inflammation

- Milk thistle (Silybum marianum)—
   may decrease inflammation
- Peppermint oil (Menthae piperitae aetheroleum)—approved in Germany to treat hives
- Turmeric (Curcuma longa)—may decrease inflammation and swelling, particularly when used in conjunction with a supplement called bromelain; rarely, though, bromelain may cause an allergic reaction.

Toki-shakuyaku-san (TSS) was found to decrease circulating immune complexes in animals. The main active ingredient to help clear the complexes was thought to be:

• Angelica root (Angelica archangelica)

Herbs that may cause allergic hypersensitivity reactions, such as cayenne pepper (*Capsicum* spp., used to treat forms of arthritis), should be avoided in the case of serum sickness.

### Homeopathy

 Apis for hives with intense burning as well as for swelling; people for whom this treatment is appropriate

- describe a stinging relieved by cool compresses
- Rhus toxicodendron for hives that are very itchy and relieved by warm compresses; a person for whom this is appropriate tends to be restless and must change positions frequently
- Urtica urens for hives and other red, raised rashes that are painful, burning, and stinging but relieved by rubbing

### Massage

Massage should not be used in cases of serum sickness as it may promote inflammation as well as lower blood pressure.

## **Prognosis/Possible Complications**

Serum sickness usually resolves in 7 to 10 days, with full recovery in 2 to 3 weeks. However, it may lead to nervous system disorders as well as a life-threatening allergic reaction called anaphylaxis.

### Follow up

Physicians should monitor acutely ill persons for rare instances of myocarditis and peripheral neuritis.

## 143.Sexual Dysfunctions

Sexual dysfunctions cover a wide variety of disorders, including male impotence, premature ejaculation in males, spasms of the vagina, pain with sexual intercourse, and problems with sexual desire (libido) and response. Men over age 65 are at increased risk for impotence. Impotence, however, is not a normal part of aging. The causes of sexual disorders vary, and include psychological causes and some medical conditions, such as illness or injury.

## Signs and Symptoms

- Premature or abnormal ejaculation in men
- Inability to achieve or maintain an erection (impotency)
- Pain during intercourse
- Lack or loss of sexual desire
- Difficulty achieving orgasm
- Inadequate vaginal lubrication in women

#### What Causes It?

Age 65 and over in men

- Depression or anxiety
- Stressful life events
- Certain medical conditions

## What to be done

Ethnic, cultural, religious, and social background, which can influence sexual desires, expectations, and attitudes. Blood tests can help between distinguish psychological and physical causes sexual dysfunctions. Other tests for men may include tumescence penile measurements, which are done sleeping to determine whether an impotence problem is psychological or physical.

## **Treatment Options**

Men and women whose sexual dysfunction is related to depression can take antidepressants. Vasodilators administered by injection are sometimes used for impotence. Viagra (sildenafil citrate), a relatively new drug for treating impotence, can have serious side effects in some men. Some products are available as creams or

gels for women whose bodies produce inadequate lubrication. A variety of psychological, behavioral, and interpersonal therapies are also available for many sexual disorders. Surgery on the veins in the penis can be performed in severe cases, but this treatment is still considered experimental. An implant in the penis may help impotence if the problem does not respond to other treatment.

Complementary and Alternative

Therapies

Sexual dysfunction secondary to decreased circulation, hormonal imbalance. depression, or anxiety may be reduced with alternative therapies.

#### Nutrition

Vitamin C (250 to 500 mg one to times per day) supports vascular integrity.

Vitamin E (400 IU per day), B6 (50 to 100 mg per day), and zinc (30 mg day) to support hormone per production.

Magnesium (200 mg twice a day) supports hormone production.

B-complex (50 to 100 mg per day) helps reduce stress.

### Herbs

For sexual dysfunction related to poor circulation:

- Ginkgo (Ginkgo biloba, 50 to 100 mg per day) increases peripheral circulation and may improve sexual function.
- Hawthorn (Crataegus monogyna), rosemary (Rosmarinus officinalis), ginger root (Zingiber officinalis), and prickly ash bark (Xanthoxylum circulatory clava-herculis) are or in singly stimulants. Use combination, 3 cups of tea per day or 20 to 30 drops tincture three times per day.
- (Pausinystalia bark Yohimbe yohimbe) can be used for sexual dysfunction, under the supervision of your provider.

secondary dysfunction sexual hormonal imbalance:

- Chaste tree (Vitex agnus cactus) helps normalize pituitary function but must be taken long term (12 to 18 months) for effectiveness.
- Saw palmetto (Serenoa repens) may help hormone balance.

Damiana (Turnera diffusa) may support testosterone levels. It also tones the central nervous system and may help relieve anxiety.

Milk thistle (Silybum marianum), dandelion root (Taraxacum officinale), and vervain (Verbena officinalis) support the liver and may help restore hormone ratios. Use equal parts in a tea (1 cup before meals), or tincture (15 to 20 drops before meals).

For sexual dysfunction associated with

depression or anxiety:

St. John's wort (Hypericum perforatum), kava kava (Piper methysticum), skullcap (Scutellaria lateriflora), lemon passionflower officinalis), (Melissa (Passiflora incarnata), and gotu kola (Centella asiatica). Combine equal parts in a tea (1 cup twice a day) or tincture (20 to 30 drops twice a day). May take six weeks for results.

## **Physical Medicine**

Contrast sitz baths promote circulation. Need two basins that you can comfortably sit in. Sit in hot water for three minutes, then in cold water for one minute. Repeat this three times to complete one set. Do one to two sets per day three to four days per week.

Massage

Therapeutic massage can reduce the effects of stress.

Follow up

Most sexual dysfunctions are long-term and require professional care.

Special Considerations

Certain drugs and herbs used for treating these psychological or physical disorders may have serious side effects. Marital counseling and other forms of interpersonal therapy are also important.

## 144.Sexually Transmitted Diseases (STDs)

Sexually transmitted diseases (STDs) are infectious diseases that are spread through sexual contact. STDs are among the most common infectious diseases in the world today. There are over 20 types, and the incidence is on the rise. Some of the most common STDs include chlamydial infection, genital herpes, genital warts, gonorrhea, HIV and syphilis.

### Signs and Symptoms

- Itching
- Discharge
- Pustules (pus-containing blisters)
- Genital lesions including ulcers, blisters, rashes, and warts; ulcers may be painful
- Abdominal pain
- Rectal infection and inflammation of the rectum
- Fever
- Muscle pain
- · Painful urination
- Swollen lymph glands in the groin

## What Causes It?

STDs are caused by microbial agents and spread primarily (but not exclusively) through sexual contact. Some STDs can also be passed from a mother to her baby during delivery and through breastfeeding while infected. Sharing infected needles may pass others. Some of the most common STDs and the microorganisms that cause them are listed below.

- AIDS—human immunodeficiency virus (HIV)
- Chlamydial infection—Chlamydia trachomatis
- Genital herpes—herpes simplex virus (HSV)
- Genital warts—human papillomavirus (HPV)
  - Gonorrhea—Neisseria gonorrhoeae
  - Syphilis—Treponema pallidum

## Who's Most At Risk?

People with the following conditions or characteristics are at risk for developing STDs.

 Having a sexual partner with an STD; again, in many cases, an STD may be present without symptoms

- Having many sexual partners, or a partner who has many sexual partners
- Having sex without the use of condoms or other protective devices
- Having one STD increases the likelihood of contracting another
- Adolescents are at highest risk for acquiring an STD for the first time
- Living under stress from poverty, poor nutrition, or poor or absent healthcare
- Practicing anal intercourse increases risk for HIV, gonorrhea, and syphilis
- Having a weakened immune system
- Using intravenous drugs
- Using spermicidal foams and jellies does not protect against STDs and may, in some cases, even promote contraction of certain STDs, including HIV

#### What to be done

Blood tests and other diagnostic procedures including cultures from the genitalia can reveal the microbial agent responsible for the STD and allow the provider to select the right therapy.

# **Treatment Options Prevention**

- Have a mutually monogamous sexual relationship with an uninfected partner
- Correctly and consistently use a male or female condom for every act of oral, anal, or vaginal intercourse
- Use clean needles if injecting intravenous drugs
- Prevent and control other STDs
- Have regular checkups for STDs even if you have no symptoms, especially if you are having sex with a new partner or with multiple partners
- Learn the common symptoms of STDs and seek medical help immediately if you develop any symptoms

Drug Therapies

STDs are generally treated with antibiotics. See the monograph on HIV and AIDS for details on how that condition is treated.

Complementary and Alternative Therapies

There are some possible applications of CAM therapies in the case of STDs-as adjunctive treatment, as prevention, improve symptoms, or to reduce certain complications, such as arthritis from gonorrhea. Even during treatment, STDs remain highly contagious and the necessary precautions to prevent transmission to sexual partners must be taken.

## Nutrition

Experimental studies have shown that ascorbic acid (vitamin C), a powerful antioxidant, may help prevent cellular damage from chlamydia. Some physicians recommend Lactobacillus acidophilus in either food or supplement form to help restore normal organisms in the body in the case of Candida (yeast) infections or after antibiotic use.

#### Herbs

Propoli is rich in flavonoids, and has antimicrobial and anesthetic properties. A Canadian propolis ointment, the acyclovir, and placebo ointments in 90 patients with recurring chronic herpes lesions. Treatment began in the blister phase of infection. Propolis was found to be significantly more effective than both acyclovir and placebo in clearing up lesions and shortening the time to heal.

Case reports of four patients treated with an oral herbal formula called WTTC (Wisteria floribunda, Terminalia chebulae, Trapa natans, and Coicis semen), combined with complete other herbs, showed resolution of both oral herpes (cold sores around the mouth) and genital herpes within 3 to 7 days. The study's authors suggest the formula may help reduce recurrence of HSV and pain, and speed recovery. The following herbs, often used in clinical practice for STDs, have not yet been researched adequately for effectiveness by scientific studies: licorice root (Glycyrrhiza glabra) and lemon balm (Melissa officinalis) for HSV; thuja (Thuja occidentalis) for HPV; and garlic (Allium sativum) and essential oils of oregano (Oreganum vulgare), lavender (Lavandula angustifolia), and tea tree (Melaleuca alternifolia) for HPV and Candida viruses.

## Homeopathy

Homeopaths various homeopathic use remedies to treat STDs.

### Acupuncture

Four hundred five men with urethritis caused by organisms other than gonorrhea, such as Chlamydia trachomatis, treated with 1 hour of daily acupuncture over a 22-month period. Acupuncture may help to heal herpes lesions, lengthen the period of remission, and reduce recurrences of the infection. Patients with gonoccocal arthritis were treated with a combination of acupuncture, garlic moxibustion (burning of the herb over the skin), pricking blood, cupping (affecting blood flow by placing suction cups on the skin), and removing fluid from the joints.

## Prognosis/Possible Complications

When diagnosed and treated early, many STDs can be treated effectively. Some types of STDs commonly recur; some can result in permanent damage to the reproductive organs and infertility. Having other STDs increases the risk for becoming infected HIV. Antibiotic resistance organisms that cause certain STDs may interfere with the effectiveness of treatment.

### Follow up

Depending on the type of STD you have, your provider may want to see you for follow-up visits to be sure the disease has not recurred or to continue your treatment. If you are pregnant, an STD can cause serious complications for your unborn baby.

Shock is a failure of the circulatory system and is a life-threatening medical emergency. Its key feature is inadequate blood flow to vital organs. It is considered a

145.Shock syndrome and can arise from any of a number of causes. It is usually associated with low blood pressure and decreased urine production.

## Signs and Symptoms

- Low blood pressure, at times undetectable
- Reduced alertness and awareness, confusion, and sleepiness
- Cold, moist, and often bluish and pale hands and feet
- Weak and/or rapid pulse
- Rapid breathing and hyperventilation
- · Decreased urine volume
- In septic shock-shaking chills, rapid temperature increase, warm, flushed skin, and rapid pulse
- In shock related to heart problems—lung congestion, rapid pulse, heart murmur, engorged neck veins

#### What Causes It?

- Heart attack (myocardial infarction)
- Rupture of the wall between the heart's ventricles (main pumping chambers)
- Aneurysm (bulging) in a ventricle wall
- Prolonged open heart surgery involving heart/lung bypass
- Dysfunction or inflammation of the heart muscle (cardiomyopathy or myocarditis, respectively)
- Irregular heartbeat, too rapid or too slow
- Defective heart valves, either real or artificial, including narrowing of the aortic valve, leading to decreased blood flow from the heart
- Increased thickness of the wall of one of the ventricles, blocking blood flow out of the heart

Extracardiac obstructive shock can result from the following:

- Pericardial tamponade (buildup of fluid that puts pressure on the heart, preventing it from filling with enough blood)
- Massive pulmonary embolism (blockage of blood flow to the lungs by a blood clot, gas bubble, bit of tissue, or other object)
- Tension pneumothorax (collapse of the lungs caused by air that collects outside them due to a rupture in the lungs or chest wall)

• Severe high blood pressure in the vessels coursing through the lungs

Hypovolemic shock can result from the following:

- Severe bleeding from an injury or disease process
- Severe loss of fluids, as from prolonged vomiting or diarrhea, or from extensive burns
- Diabetes insipidus (a metabolic disorder that causes extreme thirst and urine output)

Distributive shock can result from the following:

- Bacterial infection in the blood (septic shock)
- Drug overdose
- Anaphylaxis (severe, body-wide allergic reaction)
- Abnormal opening of blood vessels due to neurological dysfunction (neurogenic shock)
- Addisonian crisis (a severe adrenal gland insufficiency)

#### Who's Most At Risk?

The following conditions and characteristics increase the risk for shock:

- Serious injury and trauma
- Heart conditions such as heart disease or heart attack
- Surgery
- Bacterial infection that has spread to the blood
- · Bleeding
- Loss of a large volume of fluids from severe diarrhea or vomiting
- Excess alcohol use
- Severe anemia
- Allergic reaction to a drug, food, or environmental exposure
- Drug overdose
- Pregnancy

## What to be done

Check blood pressure, assess mental status (memory, orientation, alertness), and measure urine output and obtain urine cultures, and order blood tests to check heart, lung, and kidney function and search for evidence of sepsis. Imaging and other procedures—such as ray, X electrocardiography (ECG), and echocardiography—may be performed to check the status of the heart. A heart

catheterization may also be used to determine the cause and severity of the individual case of shock.

## **Treatment Options**

Prevention

To help prevent shock, people should have heart disease and other conditions that may predispose them to shock appropriately treated.

Treatment Plan

The main goals of treatment are to maintain blood pressure and to make sure the person's vital organs get enough blood and oxygen. First aid for shock includes laying the person down, raising the legs to help blood return to the heart, stopping any bleeding, ensuring warmth, and performing cardiopulmonary resuscitation (CPR), if needed. Emergency medical staff will administer oxygen and, in the case of hypovolemic and septic shock, intravenous fluids.

**Drug Therapies** 

- Agents to increase pressure in the arteries and increase cardiac output, such as dopamine, dobutamine, and norepinephrine
- Medications to either dilate or constrict the blood vessels
- Corticosteroids for anaphylactic shock, to stabilize the patient and prevent recurrence
- Antibiotics for septic shock, to combat wide-ranging infection
- Morphine to dilate veins and decrease anxiety
- Thrombolytic therapy may be considered in the case of myocardial infarction or pulmonary embolism

Surgical and Other Procedures

Depending on the cause of shock, surgery may be required to repair heart valves or rupture of a ventricle, artificially augment blood flow from the heart, or remove an embolism.

Complementary and Alternative Therapies

Shock is always life-threatening and requires emergency conventional care. Some CAM therapies, however, may be helpful as an adjunct to conventional treatment.

#### Nutrition

Treatment with antioxidants helps rid the body of free radicals may protect against some types of shock. Other nutrients may also be protective.

- Carnitine may be helpful in treating cardiogenic, septic. hypovolemic shock. Patients with septic, cardiac, or traumatic shock acetyl-L-carnitine showed that helped improve the conditions of patients with all three types of included Improvements shock. returning heart rate and blood pressure to normal and boosting oxygen delivery throughout the body. L-carnitine has to prevent in cardiogenic shock suffering from a heart attack.
- Coenzyme Q10 (CoQ10), an antioxidant, may be beneficial in treating hypovolemic and septic shock. CoQ10 helped to protect lung function and improve blood flow. CoQ10 improved heart function, blood flow, and blood pressure.
- Glutamine added to parenteral nutrition may protect the intestines and prevent complications from septic shock.
- N-acetylcysteine (NAC) improved the immune system response in mice that had septic shock caused by endotoxins (toxins released from bacterial cells).
- Omega-3 fatty acids appear to fight inflammation, while omega-6 fatty acids appear to promote it. Studies of rats and guinea pigs suggest a diet rich in polyunsaturated omega-3 fatty acids compared with omega-6 fatty acids may protect against the harmful effects of septic shock.
- Vitamins B<sub>3</sub> -- Nicotinamide (a form of vitamin B<sub>3</sub>) may help protect against bacterial endotoxin that causes septic shock. In one study of rats that had endotoxic shock, blood pressure improved in those that received nicotinamide compared to those that did not receive this supplement.

• Vitamin B<sub>12</sub> -- Studies in animals with endotoxic shock suggest that blood pressure may be improved in that clinical situation by taking hydroxocobalamin (a form of vitamin B<sub>12</sub>).

### Herbs

Plant-based medicines that support the immune system may be beneficial in treating septic shock. For instance, an Ayurvedic formula containing the following ingredients helped reduce the blood levels of bacteria in rats infected with *Escherichia coli* compared to rats that received a placebo:

- Ashwagandha (Withania somnifera)
- Indian gooseberry (Phyllanthus emblica)
- Sweet basil (Ocimum sanctum)
- Tamarisk (Tinospora cordifolia)

Injections of the following herbs thought to regulate the flow of *qi* (life energy), appeared to promote blood circulation and help prevent failure of the circulatory system as well as lower the death rate significantly in the treatment group compared to the control group:

- Kangjue tongmai
- Yiqi huiyang
- · Yiqi jiuyin

Homeopathy

Homeopathic doctors for emergency conditions, however, often use the remedy Aconite.

## Acupuncture

In animals with hypovolemic shock from bleeding, electroacupuncture raised blood pressure, protected cardiac function, and normalized the levels of various protective substances in blood.

## **Prognosis/Possible Complications**

In most cases, the outcome of shock depends on receiving immediate and proper treatment. If attended to early, shock is reversible in many cases depending on its cause. Immediate treatment for anaphylactic shock, for example, usually results in complete recovery. But any case of shock is life threatening, regardless of its cause, particularly in the elderly. Shock often causes organ damage (including the kidneys, brain, and liver), cardiac arrest, and respiratory failure.

### Follow up

Those who have suffered from shock will most likely be admitted to intensive care. Following treatment, the physician will carefully monitor the person's condition, including temperature, blood pressure, cardiac function, urine flow, blood chemistry, and blood cells.

# 146.Sinus Headaches

Sinus headaches cause a dull, deep, or severe pain in the front of head and face. They are caused by an inflammation in the passages behind the cheeks, nose, and eyes. Bending down or leaning over generally makes the pain worse, as does cold and damp weather. Sinus headaches are often worse in the morning, and better by afternoon.

## Signs and Symptoms

Sinus headaches are generally described by the following characteristics:

- Dull or severe pressure-like pain in one specific area of the face or head
- Facial tenderness to touch
- Pain aggravated by sudden movements of the head and bending forward

- Worse pain in the morning because mucus has been collecting and draining all night
- Sudden temperature changes, like going out into the cold from a warm room, also worsen the pain
- Headache often starts when you have a bad cold or just after

Other symptoms that may be present related to sinus inflammation (sinusitis):

- Postnasal drip with sore throat (pharyngitis)
- Yellow or green discharge from nose
- Red and swollen nasal passages (nasal congestion)
- Mild to moderate fever
- General sense of not feeling well (malaise)

Fatigue

Causes Sinus headaches are caused by sinus congestion inflammation (called and sinusitis). Sinusitis, in turn, is caused by either a respiratory infection (such as a cold) or allergies (like hay fever, also called allergic rhinitis). The sinuses are air-filled spaces lined with mucous membranes surrounding the forehead, cheeks and eyes. Healthy sinuses allow mucus to drain and air to circulate throughout the nasal passages. When sinuses become inflamed, these areas get blocked and mucus cannot drain. This lack of proper sinus drainage can lead to infection. Sinus headaches can also result from changes in atmospheric pressure (for example, from swimming or climbing to high altitudes)

#### Risk Factors

- History of allergies (especially hay fever) or asthma
- Disease or an abnormal structure in the sinus area; for example, nasal polyps (swellings in the nasal bone spurs passage), (projections of bone in the nose), nasal or facial tumor, deviated septum, or cleft palate
- Climbing or flying to high altitudes
- Frequent swimming and/or diving

Diagnosis

If headache symptoms are characterized by the description in the section entitled Signs and Symptoms above, that helps the doctor make the diagnosis. Also, if you have had a allergy flare-up, recent cold, symptoms of sinusitis, that also helps make a definite diagnosis. On physical exam, the doctor will look in your nose to check for evidence of congestion and nasal discharge. He or she will also press on areas of your for tenderness. check Transillumination (shining a light through the sinuses) is another simple method that your doctor may use to look for sinus inflammation; if the light does not shine through, this suggests congestion. If the diagnosis is still not clear, your doctor may consider x-rays, a CT scan, or an MRI to look for the cause of your headache. If the headache is a sinus-type, then these tests should show inflammation.

## Treatment Approach

The best way to avoid or get rid of a sinus headache is to treat the underlying sinus inflammation and, if present, clear any infection by using antibiotics. Treating the inflammation involves anything from using humidifier to taking medicines to surgically drain of the mucous in the sinuses. Relaxation techniques may be helpful for headaches in general. More sinus headaches, specifically for acupuncture and homeopathic remedies help many people prone to sinus congestion and its symptoms.

## Lifestyle

The following measures congestion in sinuses:

- Use of a humidifier
- Saline nasal spray
- Inhaling steam 2 to 4 times per day
- Additional measures that tend to help relieve all types of headaches or help you prevent them include:
- Stretches for the head and neck
- Relaxation techniques.

#### Medications

reduce used Decongestants—are inflammation and relieve sinus symptoms; example, (for nasal in these come pheylephrine, oxymetazoline, (namely, oral xylometazoline) or phenylpropanolamine) pseudoephedrine, forms. The problem with nasal sprays is that dependency and promote can (congestion "rebound" congestion that worsens if the spray is used for a prolonged therefore, time); of decongestants should not be used for longer than 3 to 5 days in a row, unless specifically instructed by doctor. Also, decongestants can cause constriction of blood vessels and, therefore, should not be used if you have pressure, blood high disease, heart migraines, or Raynaud's disease; you should also not use decongestants if you have difficulty urinating (for example, from an enlarged prostate), have emphysema, or take certain medications such as antidepressants. decrease spraysteroid Nasal especially if you inflammation, structural problem a or allergies contributing to the inflammation (like a nasal polyp). Examples of this group of medications include beclomethasone, budesonide, flunisolide, fluticasone, mometasone, and triamcinolone.

Antibiotics are prescribed if a bacterial infection is present or suspected. There are many different antibiotics that doctor may consider when treating a sinus infection.

## Surgery and Other Procedures

Surgery may be necessary if your sinus headaches are related to structural problems such as a deviated septum or nasal polyps. Even when such structural problems are present, medication and other less invasive alternatives are tried before surgery is recommended. This is because of the potential risks associated with surgery and because surgery is not always successful for getting rid of symptoms even if the structural problem has been fixed. Surgical procedures for an Ear, Nose, and Throat (ENT) specialist perform sinuses, also called an otolaryngologist.

## **Nutrition and Dietary Supplements**

There are several supplements that may help prevent or treat sinus headaches because they either diminish sinus inflammation or help to ward of colds, which, in turn, makes it less likely for sinusitis.

- · Bromelain and Quercetin
- Lactobacillus and other probiotics ("friendly" bacteria)
- N-acetylcysteine, a modified form of cysteine
- Vitamin C
- Zinc

#### Herbs

- Barberry (Berberis vulgaris)
- Goldenseal (Hydrastis canadensis); although, barberry is preferable because goldenseal is endangered
- Echinacea (Echinacea angustifolia/E. pallida/E. purpurea)
- Ephedra (Ephedra sinica); because of some serious risks associated with this herb, it should only be used under the guidance of a trained health professional
- Eucalyptus (Eucalyptus globulus)
  Although adequate research is lacking, other herbs that have been used traditionally to treat headaches include:
  - Chinese skullcap (Scuterllaria baicalensis) – can reduce inflammation associated with allergies such as hay fever (allergic

- rhinitis); also, skullcap (Scutellaria lateriflora), a close relative of Chinese skullcap, is used by herbalists for headaches, particularly tension headaches
- Devil's claw (Harpagophytum procumbens) has pain relieving and anti-inflammatory properties
- Feverfew (*Tanacetum parthenium*), a member of the sunflower family, has been used for centuries in European folk medicine as a remedy for headaches and fever; in present day, this is mainly used to treat migraine headaches, which has been studied scientifically
- Ginkgo (Ginkgo biloba) early evidence suggesting that ginkgo may help prevent symptoms, like headaches associated with change in altitude
- Jamaica dogwood (Piscidia erythrina/Piscidia piscipula) according to animal studies, this herb relieves pain, reduces inflammation, lowers fever, and alleviates cough; Jamaica dogwood is a potent herb and should be used only under the guidance of a qualified healthcare professional
- Lavender (Lavandula angustifolia)

   used by aromatherapists as a tonic
   in inhalation therapy to treat
   headaches
- Linden (Tilia cordata/platypus)
   flowers used for colds, cough,
   fever, infections, and headache
   (particularly migraine)
- Willow bark (Salix spp.) Willow bark's most important medicinal qualities are its ability to ease pain (for example, from headaches) and reduce inflammation

## Homeopathy

- Arsenicum album for throbbing, burning sinus pain that is relieved by lying upright in a cool room with open windows
- Belladonna for throbbing headaches that come on suddenly and feel worse with motion and light; pain is partially relieved by pressure, standing, sitting, or leaning backwards

- Bryonia for headaches with a steady, sharp pain that occurs most often in the forehead but may radiate to the back of the head: symptoms tend to worsen with movement and light touch, but firm pressure alleviates the pain; person for whom this remedy is most appropriate is usually irritable may experience vomiting, and constipation
- Hepar sulphuricum headaches described as "a nail being driven between the eyes;" these types of headaches are accompanied by thick, yellow nasal discharge; symptoms tend to worsen with movement and light touch of the scalp and improve with pressure
- Iris versicolor for throbbing headaches that occur on one side of the head, especially after eating sweets; visual disturbances may also occur; these headaches are worse in the early morning, during spring and fall, and symptoms tend to worsen with vomiting
- Kali bichromicum for sinus headaches and congestion; pain often occurs between and behind generally the eyes; symptoms progress throughout the morning, worsen with cold and motion, and improve with warmth and pressure
- Mercurius for raw, swollen this remedy is nostrils: appropriate for individuals whose pain feels as though the head has been placed in a vise; pain may also extend to the teeth; symptoms tend and night at worsen individual may alternate between sweating and having the chills; nasal discharge may be bloody
- for muriaticum Natrum congestion and headaches associated with allergies
- headaches \_\_\_ for Pulsatilla triggered by eating rich, fatty foods, particularly ice cream; pain may move around the head but tends to be concentrated in the forehead or on one side of the head and may be accompanied by digestive problems

- or occur around the time of menstruation; symptoms tend to worsen at night and with coughing and blowing the nose; children often develop these symptoms while at school
- Silicea for sinus pain that improves with pressure, head wraps, and warm compresses
- Spigelia for stinging, burning, or throbbing sinus pain that often occurs on the left side of the head; symptoms tend to worsen with cold weather and motion but may be temporarily relieved by compresses and lying on the right side with the head propped up

### Acupuncture

An acupuncturist diagnoses headaches not as migraine, tension, or sinus, but rather as deriving from "energetic" conditions imbalances. Practitioners often describe sinus headache as a "dampness" which creates inflammation and fluid retention in the mucus membranes. Strengthening the spleen meridian can clear this dampness. In addition to needling, acupuncturists may use moxibustion those with special training may also recommend herbal therapy.

## Chiropractic

Chiropractor may decrease pain and improve sinus drainage in certain individuals.

## Mind/Body Medicine

For headaches in general, relaxation meditation such as techniques biofeedback can be helpful, particularly if the headaches are chronic and recurrent, as can be the case with sinus headaches.

## Other Considerations

If you are not better in a few weeks, primary care physician may send to see an ENT specialist for tests to find the cause of sinus congestion.

#### Pregnancy

Sinus congestion often acts up during pregnancy. There are many herbs and medications that pregnant and breastfeeding women should not use. Please check the monographs on individual herbs and drugs discussed in this article to know which are safe and which are not. Also, check with obstetrician before using any herbs or supplements.

### Warnings and Precautions

Be sure to contact physician if you experience a new headache or any change in the quality of previous headaches. Another reason to notify physician right away is if

you have a new fever and/or a particularly stiff neck along with the headache; this may indicate meningitis, a potential complication from sinusitis.

### 147.Skin Cancers

Skin cancers are generally a result of overexposure to the sun. While skin cancers are the most common form of cancer, many types are both preventable and treatable. Skin cancer is classified into five different types:

- Basal cell carcinoma (BCC) is the most common form and accounts for 75% of all skin cancers. It originates in the basal cells, at the bottom of the epidermis (outer skin layer), and is caused by long-term exposure to sunlight.
- Squamous cell carcinoma (SCC) is the second most common type, accounting for 20% of all skin cancers. It originates in the epidermis, eventually penetrating the underlying tissue if not treated. In a small percentage of cases, this cancer metastasizes, or spreads, to other parts of the body.
- Malignant melanoma (MM) is a form of skin cancer that currently is affecting an increasing number of people. There are more than 40,000 new cases of malignant melanoma annually in the U.S., resulting in more than 7000 deaths. MM is a very serious type of skin cancer, but the cure rate is quite good if it is diagnosed and removed early. MM originates in moles or other growths on normal skin.
- Paget's disease (PD) is a rare type of skin cancer. It generally appears on the nipple, and is associated with an underlying breast cancer. It may also appear in the groin or near the anus, possibly originating in the sweat glands.
- Kaposi's sarcoma (KS) is caused by a virus in the herpes family. An aggressive AIDS-related form affects about one third of AIDS patients. A more slow growing form

occurs in elderly men of Italian or Jewish ancestry.

## Signs and Symptoms

The following signs and symptoms accompany skin cancer:

- A new skin lesion or open sores that bleed, ooze, or crust, and fail to heal in an expected time frame
- Enlargement of an existing skin lesion
- Change in color of a mole
  - Reddish patch or irritated area, frequently occurring on the chest, shoulders, arms, or legs
- Shiny bump that is pearly or translucent
  - Poorly defined borders of a skin lesion

## What Causes It?

The primary cause of skin cancer is exposure to ultraviolet (UV) radiation from the sun. A virus, as stated earlier, causes kS, and Paget's disease is related to underlying breast cancer.

## Who's Most At Risk?

- Light skin color
- Spending a lot of time outdoors in work and/or leisure activities
- History of severe sunburn
- Family history of skin cancer
- Large dark-colored birthmark known as congenital melanocytic nevus
- Certain non-cancerous skin conditions, such as actinic keratosis, can predispose a person to skin cancer
- HIV (human immunodeficiency virus) is a risk for KS specifically

## What to be done

Examine skin for new, changed, or unusual moles. This may involve the use of a dermatoscope, which is used for close examination of such skin growths. If any growths appear cancerous, a biopsy will be done.

## **Treatment Options**

Prevention

Skin cancer is a preventable disease. If you are in a high-risk category, take measures to avoid sun exposure and, when in the sun, to protect yourself by covering up, wearing a hat, and applying sunscreen with an SPF of at least 30. It is also wise to have regular skin cancer screenings with physician or a dermatology specialist.

## Treatment Plan

The primary goals of treatment are to remove the cancerous growth(s) and stop the spread of the disease.

**Drug Therapies** 

Melanoma that is deep or has spread, and AIDS-related Kaposi's sarcoma, may be treated with chemotherapy.

Surgical and Other Procedures

- Most skin cancer can be surgically removed
- Where surgery is not possible, cryotherapy (freezing) may be used
- Paget's disease of the nipple usually requires mastectomy (removal of breast tissue)

Alternative and Complementary **Therapies** 

or following foods Eating certain therapeutic diets may help prevent skin cancer.

#### Nutrition

The role of such nutrients as antioxidants includes vitamin C, beta-carotene, selenium, and vitamin A, folic acid, fats and proteins specifically, and a variety of whole foods. There appears to be some protective effect from antioxidants and from certain foods such as fish, beans, carrots, chard, pumpkin, vegetables and broccoli, cabbage. containing beta-carotene and vitamin C. Lignans, substances found in foods such as soy and flaxseed, may also be beneficial in fighting cancer in general, including the spread of melanoma from one part of the body to another, as demonstrated in animals. Gerson's diet, which is customized for each patient, is one of these. Common measures in the Gerson's diet include low salt and low fat intake, highly concentrated nutrients given through hourly feedings throughout the day of raw fruit and vegetable juices, and strategies to speed up metabolism (the breakdown and use of food), such as exercise, taking supplements, and restricting calories. Castor oil, administered every other day for several weeks, and coffee enemas given as frequently as every 4 hours over a 24-hour period, are thought to alleviate pain and improve nutritional status.

Herbs

Green tea (Camellia sinensis) contains polyphenols, compounds that are potent antioxidants. Antioxidants eliminate free radicals; harmful by-products of cells' metabolism that are thought to play a role in cancer. The main polyphenol in green tea is epigallocatechin gallate (EGCG). EGCG and green tea polyphenols may prevent the onset and growth of skin tumors.

For Kaposi's sarcoma, some naturopaths recommend a paste made from lemon balm (Melissa officinalis) cream, several drops of Hoxsey-like formula (a mixture of herbs and potassium iodide thought to be effective against cancer), and powdered turmeric applied to lesions twice a day. Natural killer cells (NK) are white blood cells that attack cancer and other harmful substances in the body. Cordyceps sinensis was effective against malignant melanoma by promoting NK activity and inhibiting tumor formation.

Homeopathy

Homeopathy is widely used among patients with melanoma, and warrants scientific investigation.

Acupuncture

not used as a While acupuncture is evidence itself, for cancer treatment suggests it can be a valuable therapy for cancer-related symptoms. Acupressure has controlling in useful proved breathlessness; this is a technique that patients can learn and then use to treat them. They will provide acupuncture and/or herbal therapy during active chemotherapy treat cancer Acupuncturists radiation. individualized an on based patients assessment of the excesses and deficiencies of qi located in various meridians. In many cases of cancer-related symptoms, a qi deficiency is usually detected in the spleen or kidney meridians.

Massage

Massage is generally not recommended for those who have been diagnosed with skin cancer.

## **Prognosis/Possible Complications**

Prognosis varies depending on the type of skin cancer, as follows:

- Basal cell carcinoma: generally excellent
- Squamous cell carcinoma: excellent for small lesions removed early and completely
- Malignant melanoma: 5-year survival is almost 100 percent for very superficial lesions removed early; however, thick lesions and melanoma that has spread to other organs have poor prognosis

- Paget's disease: depends on the extent and cell type of the underlying breast cancer
- Kaposi's sarcoma: good for superficial lesions of the slowgrowing form in the elderly of Italian or Jewish ancestry; the course of AIDS-related KS depends on the status of the person's immune system

## Follow up

See regularly for screenings to check for a recurrence of skin cancer.

## 148.Sleep Apnea

People with sleep apnea stop breathing for short periods of time while they are asleep. You generally don't wake up fully when this happens, but in the morning you don't feel rested, and you feel sleepy during the day. Sleep apnea can be caused by a blocked upper airway (called obstructive apnea), by your brain not signaling lungs to breathe (central apnea), or by a combination of these two problems.

## Signs and Symptoms

The symptoms of sleep apnea include the following.

- Loud, irregular snoring, then quiet periods of at least 10 seconds when breathing stops; these episodes can happen up to 100 times or more each hour
- Daytime sleepiness, always feeling tired
- Morning headaches, sore throat, dry mouth, cough
- Feeling depressed, moody, irritable
  - Unable to concentrate or remember
  - Possible impotence or high blood pressure

## What Causes It?

Apnea is caused by many physical conditions (such as obesity, or large tonsils and adenoids). The typical person with sleep apnea is an overweight, middle-aged man who has allergies, but apnea can occur at any age and in women as well as men. Sometimes drugs such as alcohol, sleeping pills, or heart medications can trigger apnea. It can also be inherited.

### What to be done

Check weight and blood pressure and ask about allergies. He or she may send home with a device to check oxygen levels while sleep. May also refer to a sleep clinic for overnight testing.

## **Treatment Options**

- A few drugs hold promise, but most have some undesirable side effects.
- Several mask and ventilator devices are available, as well as dental appliances worn in mouth. These may be uncomfortable at first.
- Sometimes surgery is needed, but provider will most likely recommend that try devices or drugs first.

Making the following lifestyle changes can help obstructive apnea.

- · Lose weight.
- Minimize your use of alcohol, antihistamines, or tranquilizers.
- Get treatment for allergies and colds or sinus problems.
- Gargle with salt water (without swallowing) to shrink tonsils.
- Develop regular sleep habits, and especially make sure get enough sleep at night.
- Sleep on your side or sitting up rather than on back. You may want to sew a couple of tennis balls to the back of sleepwear or put pillows behind you so you stay on your side.
- Use an air humidifier at night.

Don't smoke or expose yourself to other irritants (such as dust or perfumes).

Raise the head of your bed by placing bricks under the headboard.

**Drug Therapies** 

Some of the drugs used to treat central apnea include:

Acetazolamide

Clomipramine—side effects may include impotence

Medications used to treat obstructive apnea include:

- Medroxyprogesterone—side effects may include nausea, depression, growth, breast hair excess tenderness, and fluid retention
- Protriptyline—this medication used rarely; side effects may include dry mouth, constipation, frequent urination, impotence, and confusion (in the elderly)

and Alternative Complementary **Therapies** 

Alternative therapies may be useful in treating sleep apnea caused by allergies. Homeopathy and nutrition are most likely to have a positive effect. While many supplements are touted as good for weight loss, none have proved to be as effective as eating less and exercising more.

#### Nutrition

- mucuseliminating Diet: Try (dairy and foods producing weeks, two bananas) for reintroducing them and noticing any difference.
- (EFAs) fatty acids Essential moderate inflammatory response, decrease allergic response; EFAs are found to be low in obese people.
- Chromium helps regulate insulin and decrease insulin resistance. Chromium may not be effective at burning fat, but it is effective at sugar blood stabilizing decreasing sugar cravings.

Homeopathy

Arsenicum album — for respiratory disorders that worsen at night and are accompanied by fear, agitation, weakness, restlessness, exhaustion

- Lachesis for conditions that worsen while trying to sleep; this remedy is most appropriate for those who are intense, talkative, jealous, and may feel depressed (particularly in the morning); also may be frightened of going to sleep
- Opium this remedy may be prescribed for individuals with sleep apnea and narcolepsy (inability to control falling asleep during the daytime); this remedy is appropriate individuals who may be somewhat confused due to the sleep disorder
- for difficulty Sambucus breathing at night; this remedy is most appropriate for individuals who may have nasal obstruction or asthma and actually jump up out of bed with a feeling of suffocation
- respiratory for Spongia symptoms that are worsened by cold air and lying down; this appropriate is remedy individuals often feel a tightness in the chest area
- Sulphur for chronic conditions accompanied by sleep disturbances and nightmares, especially if the individual also has skin rashes that heat; with worse become remedy is most appropriate for prefer cold who individuals temperatures and strongly dislike any kind of restriction

Acupuncture

May be helpful in treating sleep apnea.

Follow up

Sleep apnea is a serious condition that can cause fatal heart problems, so it's crucial to stick with treatment plan. If using mask and ventilator equipment, be sure to take care of them. Keep in contact with physician or sleep clinic to make sure treatment is working.

**Special Considerations** 

If pregnant, may have nasal congestion that makes you snore in a way that people with apnea do, but this is not apnea.

## 149. Syncope; Fainting

Syncope, or fainting, is a sudden loss of consciousness caused by decreased blood flow to the brain. Recovery occurs within seconds or minutes for many causes of fainting. Approximately 3 to 4 percent of people, mostly the elderly, experience episodes of fainting.

## Signs and Symptoms

The following signs and symptoms before faint:

- Lightheadedness
- Blurred vision
- Sweating
  - · Heaviness in your lower limbs
  - Giddiness
  - Confusion
  - Yawning
  - Nausea, and sometimes vomiting

During a fainting episode, in addition to loss of consciousness, you may experience the following symptoms:

- Abnormal paleness
- Falling down if standing, slumping if seated
- Spasmodic jerks of your body
- Weak pulse
- Drop in blood pressure

## What Causes It?

Fainting often occurs from a simple, non-medical cause, but may be the result of a serious health condition, such as heart disease (decreased blood flow to the heart and/or irregular heart rhythm), low blood sugar (often related to diabetes), seizures, panic attacks, and problems regulating blood pressure.

## Who's Most At Risk?

People with the following conditions or characteristics are at risk for fainting:

- Over 65 years of age
- Preexisting heart disease
- Recreational drug use
- Taking certain medications such as antihypertensives, insulin, oral hypoglycemics, diuretics, antiarrhythmics, or anticoagulants
- Pregnancy

## What to be done

Do a physical examination, and perform diagnostic tests, which may include blood

tests, electrocardiogram (ECG), and imaging of the brain, such as magnetic resonance imaging (MRI). Your provider will focus on symptoms associated with the current fainting episode, medications take, preexisting medical conditions, and description of any similar episodes you may have experienced in the past. This will help provider pinpoint the cause of the fainting episodes and identify or rule out particular health conditions. If seizures are suspected, he or she may perform a test called an electroencephalogram (EEG).

### Treatment Options Prevention

- Avoid fatigue, hunger, and stress.
- Avoid changing positions quickly, especially rising from a sitting or lying-down position, for fainting caused by a change in blood pressure due to a sudden change in position. Sleep with the head of your bed elevated; wear elastic stockings to prevent pooling of blood in lower legs; avoid standing for long periods; avoid diuretics and other medicines that can contribute to the problem (your physician can help you identify these agents).
- Avoid tight clothing around the neck for fainting caused by a rise in blood pressure. Turn the whole body and not just the head when looking around.
- Avoid standing still for long periods for fainting that happens often. To prevent injuries, cover floors with thick carpeting and avoid driving or operating mechanical equipment.
- Avoid caffeine and alcohol.

## Treatment Plan

At the time of the fainting episode, place the person in a position that increases blood flow to the brain. A pregnant woman should lie on her left side to relieve pressure on the aorta, the largest blood vessel in the body. Loosen all tight clothing, apply cold water to the person's face, and turn the person's head to the side to prevent vomiting or choking.

**Drug Therapies** 

A (A 12) combinistical irregular heart rhythm causes fainting, your physician may prescribe medications such as beta-blockers, after some tests. Mineralocorticoids (such as fludrocortisone), a substance involved in regulating the balance of salt and water in the body, or salt tablets may be prescribed in the case of decreased circulation of blood or pooling of blood in the veins.

Surgical and Other Procedures

In some cases where fainting is caused by an underlying heart condition, such as slow or rapid heartbeat, a cardiac pacemaker may be necessary.

Complementary and Alternative **Therapies** 

hypnosis-based Autogenic training (a healing method that consists of a series of mental exercises designed to relax the individual and to relieve suppressed anger, emotion, and tension), deep breathing, relaxation techniques, and biofeedback may help you become aware of pre-fainting avoid fainting. symptoms to techniques may also help you control fainting related to nervous system regulation of your blood pressure. Nutrition, herbs, and acupuncture may help treat fainting; see following sections for more details.

Nutrition

earlier, low blood stated plays a role in fainting, sometimes particularly in combination with low blood pressure. Therefore, if you are prone to fainting for this reason, make sure you eat the appropriate amount and type of calories. This is especially important if you are elderly or have a history of fainting. If body has trouble processing sugar (as in the case of diabetes), need to avoid refined foods and sugar, and eat small, frequent meals high in protein. It is best to consult a registered dietitian to determine the right nutritional program for specific needs.

Herbs

In a case report about one 38-year-old man, licorice root (Glycyrrhiza glabra) combined with a high-salt diet helped clear up fainting due to low blood pressure and nervous system problems. However, you should not use licorice root if you have high blood pressure, low levels of potassium, severe kidney disease, or if you are pregnant. Even if you have normal blood pressure, a physician should monitor you if you take licorice. Some herbs used alone and together, may help protect heart. For instance, hawthorn (Crataegus monogyna) may help maintain blood pressure, control blood flow through the heart, and treat irregular heartbeat. Many herbs, however, can have toxic effects on heart if not used correctly, and may cause fainting or more serious problems. Use herbal therapies only under the supervision of an experienced physician.

Homeopathy

- Carbo vegetabilis for fainting or lightheadedness after rising in the morning, from loss of fluids, or from becoming overheated
- Opium for fainting due to excitement or fright
- fainting following for Sepia prolonged standing, exercise, or fluid loss due to fever

Acupuncture

The use of acupuncture and moxibustion (burning herbs over the skin) to revive people who could not be revived with traditional Chinese or Western drugs. Acupuncture is known for rarely causing side effects or complications. But some patients faint during acupuncture treatments. "needle fainting" in Chinese Called medicine, this comes from lowered blood pressure. It is not considered a serious complication of acupuncture. Needle be easily remedied fainting may prevented by changing the positions of the patient and the needles.

Prognosis/Possible Complications

In most people, simple fainting is not a sign of a life-threatening disease, particularly if it only happens once. The elderly are at increased risk for injury after a fainting episode, especially from fractures.

Follow up

Many people with syncope, especially the elderly and those with preexisting heart disease, may be hospitalized to look for a cause. Continuous ECG monitoring can identify irregular heartbeat as a cause of fainting, especially in people who have recurring fainting episodes.

# 150. Systemic Lupus Erythematosus (SLE)

erythematosus Systemic lupus (SLE) is the most common form of lupus. disease-a Lupus is an autoimmune disorder in which the body harms its own healthy cells and tissues. This leads to inflammation and damage of body tissues in the joints, skin, kidneys, heart, lungs, blood vessels, and/or the brain. Lupus is also considered a rheumatic disease because it can cause aches, pain, and stiffness in the joints, muscles, and bones. Lupus usually first affects people between the ages of 15 and 45 years, but it can also occur in life. childhood or later in Patients experience periods of chronic disease and remission. The prevalence of the disease is not precisely known, ranging from an estimated 15 to 50 cases per 100,000 people.

## Signs and Symptoms

- Extreme fatigue
- Painful or swollen joints (arthritis)
- Muscle pain and stiffness
- Unexplained fever
- Skin rashes
- Kidney problems
- Hair loss
- Nausea, vomiting, abdominal pain
- Headaches, migraine, seizures, stroke
- Depression, anxiety, confusion
- Photosensitivity (sensitivity to sunlight)

## What Causes It?

Researchers believe that there is probably no single cause but rather a combination of genetic, environmental, and possibly hormonal factors that work together.

## Who's Most At Risk?

- Many more women than men have lupus.
- Lupus is more common in black women and women of Hispanic, Asian, and Native American descent than in white women.
- Lupus can run in families, but the risk that a child or a brother or sister of a patient also will have lupus is quite low.

#### What to be done

A team of specialists usually becomes involved in making a diagnosis and

determining which treatment or combination of therapies will work best for you. Because lupus is so complex, reaching a diagnosis may take time and occurs gradually as new symptoms appear. A diagnosis of lupus is based on a physical examination and the results of laboratory tests, including the following.

- Complete blood count
- Erythrocyte sedimentation rate (ESR)—an elevated ESR indicates inflammation in the body
- Urinalysis
- Blood chemistries
- Complement test (a blood test that measures severity of infection)
- Antinuclear antibody test (ANA) positive in most lupus patients; other antibody tests
- Syphilis test (may be falsely positive in people with lupus)
- Skin or kidney biopsy

Imaging techniques may be used to evaluate central nervous system changes or problems and other symptoms associated with lupus.

# Treatment Options Prevention

- Avoiding sun exposure, high-dose birth control pills, penicillin, and sulfonamides (anti-bacterial agents)
- Exercising regularly
- Receiving flu and pneumococcal vaccines

## **Treatment Plan**

There is no known cure for lupus. However, your team of health care professionals can develop a treatment plan to prevent flare-ups, to treat them when they do occur, and to minimize complications.

## **Drug Therapies**

- Corticosteroid hormones, to rapidly suppress inflammation. For patients who cannot take corticosteroids, a type of immunosuppressive drug called methotrexate may be used.
- Nonsteroidal anti-inflammatory drugs (NSAIDs), to control pain, swelling, and fever
- Antimalarials, to treat fatigue, joint pain, skin rashes, and inflammation of the lungs, and to prevent flareups from recurring.

- Immunosuppressives, which restrain the overactive immune system by blocking the production of some immune cells and curbing the action of others.
- Intravenous gamma globulin, a blood protein that increases immunity, helps fight infection, and controls acute bleeding

## Surgical and Other Procedures

Surgery is sometimes performed for lupusrelated ailments.

#### Complementary and Alternative **Therapies** Nutrition

Nutritional tips for patients with lupus include the following.

- Eliminate all suspected allergens, including dairy, wheat (gluten), soy, eggs, corn, chocolate, preservatives; avoid alfalfa sprouts. Provider may want to test for food sensitivities.
- A modified fast of five to seven days at two-week intervals may be helpful, especially during flare-ups. A modified fast can consist of eating fruits, vegetables, and fish or vegetable protein.
- Avoid coffee, alcohol, and smoking.
- Minimize red meat and saturated fats to decrease inflammation.

Potentially beneficial nutrient supplements include the following.

- Omega-3 fatty acids such as flaxseed and fish oils decrease inflammation.
- Beta-carotene (50 mg three times a day), although some controversy exists about the use of vitamin A.
  - Vitamin B<sub>12</sub> (1,000 mcg via injection once or twice a week) to heal lesions.
  - Vitamin E (800 IU per day)
  - Hydrochloric acid to decrease symptoms.
    - DHEA (start at 5 mg three times a day and work up to 100 mg per day) to reduce symptoms in mild to moderate lupus, with incremental twelve benefits over three to months. Note: Tryptophan should be avoided in patients with SLEtype lupus.

- Melatonin (20 mg before bed) has been shown to be helpful in many autoimmune diseases. Take a lower dose if drowsiness occurs.
- Methylsulfonylmethane (MSM) (3,000 mg twice a day) helps prevent joint and connective tissue breakdown.
- Iron can increase inflammation. Avoid it unless anemic.

#### Herbs

Mix dandelion (Taraxacum officinale), yellowdock (Rumex crispus), echinacea (Echinacea purpurea), and garlic (Allium sativum) equal parts in a tea, 1 cup three times daily. Herbs may be useful for treating lupus, as well as secondary symptoms, such as depression and insomnia.

### Homeopathy

- Arsenicum album for restless exhaustion
- carbonica Calcarea overworked, overwhelmed people with poor stamina and low back pain
- Nux vomica for irritability with constipation and sharp, cramp-like pains
- Tuberculinum for repeated chest infections and joint pain with swollen glands

## Acupuncture

Acupuncture may help balance immune response during remissions, and alleviate flare-ups.

## Prognosis/Possible Complications

The prognosis for lupus patients is mixed. Half of lupus patients who go into remission remain so for decades, but 90 percent of patients have complications. For women, symptoms tend to decrease after menopause. Ninety percent of patients have a survival rate of 10 years, and 63 to 75 percent have a survival rate of 20 years. Patients with certain complications from lupus tend to have a poor prognosis. The major cause of lupus-related death is infection.

## Follow up

Patients need to be closely monitored during flare-ups to determine the appropriate course of treatment and induce remission.

# 151.Temporomandibular Joint Dysfunction (TMJ)

The temporomandibular joints (TMJ) connect the lower jaw, or mandible, to the temporal bones at the sides of the head. These joints are flexible, allowing the jaw to move smoothly up and down and side to side, and enabling us to talk, chew, and yawn. TMJ dysfunction involves face pain, clicking sounds in the TMJ, and limited movement of the jaw. About 33 percent of the population has TMJ dysfunction, and as many as 75 percent have some symptoms.

### Signs and Symptoms

- · Pain, particularly in the chewing muscles and/or jaw joint
- Limited movement or locking of the
- Radiating pain in the face, neck, or shoulders
- Painful clicking, popping, or grating sounds in the jaw joint when opening or closing the mouth
- A sudden, major change in the way the upper and lower teeth fit together
  - sometimes headaches. Also, earaches, dizziness, and hearing problems

## What Causes It?

- A bad bite (malocclusion) or severe injury.
- Orthodontic treatment, such braces and the use of headgear
- Jaw clicking, which is more likely the sign of a displaced disk
- which may cause Stress, aggravate TMJ dysfunction. People with TMJ dysfunction often clench or grind their teeth at night, which can tire the jaw muscles and lead to pain.

## Who's Most At Risk?

- Gender-women seek treatment two times more than men
- Age-people 30 to 50 years of age are most often affected
- Nutritional or metabolic disorders
- Grinding teeth, clenching jaw
- Malocclusion (bad bite)
- High stress levels

## What to be done

Check muscles in the area of the TMJ, look for asymmetry or inflammation in face, listen for joint clicking or scraping sounds, test mandibular range of motion, and look for evidence of jaw clenching or teeth grinding. In any neurological symptoms, such as numbness, will give a neurological examination. Imaging techniques may be used if there is evidence of degenerative disease or disk problems.

## **Treatment Options**

#### Prevention

Reducing stress and keeping from grinding teeth or clenching jaw may help prevent TMJ dysfunction or lessen the symptoms.

#### **Treatment Plan**

Some physicians consider TMJ dysfunction a medical condition while others consider it a dental problem.

## **Drug Therapies**

- Analgesics-aspirin or nonsteroidal anti-inflammatory drugs
- Minor tranquilizers muscle relaxants at bedtime to reduce spasms and pain
- Injections of a local anesthetic
- that Antidepressants-for pain persists
- Cortisone injections, in cases where no other treatment works

## **Surgical and Other Procedures**

When all other measures have failed, surgery may be necessary.

#### Complementary Alternative and **Therapies**

A comprehensive treatment plan for TMJ dysfunction may include a range complementary and alternative therapies.

## Nutrition

- Eat soft foods high in flavonoids to provide antioxidants to decrease joint pain.
- Avoid saturated fats, fried foods, and caffeine, all of which increase inflammation.
- Avoid chewing gum.

Potentially beneficial nutrient supplements include the following.

· Essential fatty acids (omega-3 and omega-6) to decrease inflammation

#### Herbs

- St. John's wort (Hypericum perforatum) may improve serotonin levels affected in TMJ dysfunction. Oil may be applied to the skin over the joint. Oral dose is 250 mg three times a day.
  - Cramp bark (Viburnum opulus) and lobelia (Lobelia inflata) are antispasmodic. Rub 5 drops tincture of each herb into joint. Do not apply to broken skin.

## Homeopathy

- Causticum for burning pains
- Hypericum perforatum for sharp shooting pains
  - Ignatia for tension in the jaw
  - Kalmia for face pain especially with other joint pains or arthritis
  - Magnesia phosphorica for muscle cramps
  - Rhus toxicodendron for pains that feel better in the morning and in dry weather, and worse after movement or in wet weather
  - Ruta graveolens for pains from overuse or injury

## **Physical Medicine**

Contrast hydrotherapy-alternating hot- and cold-water applications-may decrease inflammation, provide pain relief, and enhance healing. Use hot packs and ice wrapped in a washcloth and apply to area. Alternate three minutes hot with one-minute cold and repeat three times for one set. Do two to five sets per day.

#### Acupuncture

In treating TMJ dysfunction, acupuncturists often find a deficiency of qi in the liver meridian and relative excess in the gallbladder meridian. In addition to the primary treatment on the liver and the supporting kidney meridians, moxibustion may also be used to enhance the needling therapy.

#### Chiropractic

Chiropractors report that manipulation of the TMJ and adjacent areas in the upper spine may improve symptoms of the condition in some individuals. It is believed, in these cases, that manipulation restores movement to the TMJ.

#### Massage

Certain types of massage techniques and chiropractic manipulation may help decrease muscle spasms, provide pain relief, and prevent recurrence of symptoms.

## **Prognosis/Possible Complications**

TMJ dysfunction is treated successfully in 75 percent of patients who follow a multifaceted treatment plan. In rare cases, prolonged teeth clenching or grinding, trauma, infection, or connective tissue disease may result in degenerative joint disease or arthritis. If you experience severe grinding, you may benefit from nighttime use of a bite guard worn inside your mouth.

## Follow up

Need to see regularly to ensure the prescribed therapies are working.

## 152.Tendinitis

Tendinitis is the painful inflammation of a tendon and its ligaments, which attach it to the bone. It often results from the stress of repetitive movements. Acute tendinitis may become chronic if it is not treated. The areas most commonly affected by tendinitis are the shoulder (rotator cuff tendinitis or impingement syndrome), elbow (tennis elbow or golfer's elbow), wrist and thumb (de Quervain's disease), knee (jumper's knee), and ankle (Achilles tendinitis). Calcific tendinitis, which occurs when calcium deposits build up in a joint, often appears in people with a chronic disease, such as diabetes.

## Signs and Symptoms

- Minor edema (swelling)
- Tenderness in affected limb
- Pain that worsens when you move the affected limb
- Warmth and redness
- Crepitus (crackling)

## What Causes It?

Although the exact cause of tendinitis is unknown, it can result from overuse, undertraining, or poor technique in sports, repetitive movement in certain occupations, falling, lifting or carrying heavy objects, and extreme or repeated trauma. It may also be

seen with certain inflammatory conditions, autoimmune disorders, and some infections.

#### What to be done

A thorough physical examination is done. X rays may be taken and other diagnostic tests may be performed.

## **Treatment Options**

May prescribe pain relievers or steroid injections. Treatment also may include ice, rest, or temporary immobilization. Massage, strengthening exercises, or physical therapy help improve tendon use. Ultrasound and use of electricity help to control pain. Surgery is used only for severe tendinitis that is not healing from other treatments.

### **Drug Therapies**

- Nonsteroidal anti-inflammatory drugs (NSAIDs)—such as indocin and ibuprofen, reduce pain and inflammation; various side effects
  - Lidocaine or corticosteroid injections into the tendon—cannot be used for weight-bearing tendons because of risk of rupture
  - Colchicine—for calcific tendinitis

# Complementary and Alternative Therapies

- Ice, especially after the initial injury
- Rest
- Massage
- Temporary immobilization of the affected limb (slings, splints)
- Flexibility and strengthening exercises after acute phase has passed
- Physical therapy (such as range-ofmotion exercises)
- Ultrasonography (phonophoresis) high-frequency sound to heat an area and increase the blood supply
- Transcutaneous electrical nerve stimulation (TENS)—electricity used to control pain

#### Nutrition

- Vitamin C (250 to 500 mg two times a day) to aid in healing, increase immune function, and reduce inflammation
- Calcium (1,500 mg a day) and magnesium (750 mg a day) to aid healing of connective tissues and muscles
- Vitamin A (15,000 IU a day) for immune function and healing

- Vitamin E (400 to 800 mg a day) to reduce inflammation
- Bromelain (250 to 750 mg three times a day between meals) to reduce swelling
- Essential fatty acids (1,000 to 1,500 IU one to three times a day): anti-inflammatory

#### Herbs

- Flavonoids (500 to 1,000 mg three times a day) to reduce inflammation and maintain healthy collagen (protein found in connective tissue, skin, cartilage, and other tissue)
- Curcumin (*Curcuma longa*), yellow pigment of turmeric, (200 to 400 mg three times a day between meals) to reduce inflammation
- Willow (Salix alba) barks tea (2 to 3 tsps. in 1 cup of boiling water three times a day) for pain relief. (Caution: if you are allergic to aspirin, do not take willow bar or other aspirin-like herbs.)
- Licorice (Glycyrrhiza glabra) (3 cups tea a day) to reduce inflammation. (Do not use if you have high blood pressure.)
- Comfrey (Symphytum officinale) (1 tsp. in 1 cup boiling water four times a day) to aid healing and for pain relief

### Homeopathy

Homeopathic remedies for tendinitis include creams or gels. Arnica cream by itself or in combination with Calendula officinalis, Hamamelis virginiana, Aconitum napellus, and Belladonna, applied three to six times a day, speeds healing and decreases discomfort. For acute injuries, always start with Arnica.

Internally, the dose is usually 3 to 5 pellets of a 12X to 30C remedy every one to four hours until the symptoms get better.

- Bryonia for pains that are worse with the slightest motion or when jarred. The pain feels worse with cold and better with heat.
- Phytolacca for tendinitis where the pain is focused at the insertion of the tendons and feels worse with heat
- Rhus toxicodendron for tendinitis that is worse in the morning

• Rhododendron for tendinitis that gets worse with barometric changes

## **Physical Medicine**

- Orthotics or heel lifts and shoe correction (Achilles tendinitis)
- Elbow strap and small (2 lb.) weights (tennis elbow)
- Contrast hydrotherapy. Alternate hot and cold applications. After the first 24 to 48 hours, soak affected part for three minutes in hot water, then 30 seconds in cold water.

## Acupuncture

In 1997, the National Institutes of Health reported that acupuncture might be an effective therapy for tennis elbow. In addition, two studies examining the effect of acupuncture on this and other types of tendinitis have found that acupuncture provides better pain relief than placebo. Acupuncturists report that patients with tendinitis frequently exhibit a primary deficiency in the liver meridian, with relative excess in the gallbladder meridian. In addition to needling treatment on the

liver meridian and the supporting kidney meridian, treatments using moxibustion may also be included. Needling and/or moxibustion may also be directly applied to painful areas and related sore points.

#### Chiropractic

Chiropractors are commonly to treat tendinitis with ultrasound, electrical muscle stimulation, manual trigger point therapy, and massage. Joint manipulation may also be performed on individuals with diminished joint mobility.

#### Follow up

Tendinitis often has three stages: Stage 1 is characterized by a dull ache following activity, which improves with rest; stage 2, by pain with minor movements (for example, dressing); and stage 3, by constant pain.

### **Special Considerations**

Recurrences are common, particularly for athletes and people whose work requires repetitive motions.

## 153.Tension Headaches

Tension headaches very are common, affecting as many as 40% of teenagers and adults. They tend to start at the back of head and move forward, involving neck, scalp, and head (for example, the temporal regions on either side of forehead and the occiput, which is at the base of head just above the neck). The pain, which is due to contraction (tightness) of the neck and scalp muscles, can ultimately cover entire head. Such muscle contraction is commonly caused by stress - thus, the name "tension." Headaches originating from tightness in the neck muscles are often called cervicogenic headaches.

### Signs and Symptoms

- Headache starts at the back of your head and spreads forward
- Dull pressure or a squeezing pain, often described as a tight band or vice around the head
- Muscles in neck, shoulders, and jaw can feel tight and sore
- Bilateral meaning that it affects both sides of head equally
- · May have difficulty sleeping

## Causes

- Stress
- Depression
- · Anxiety
- Any activity (like using a computer, typing, fine work with hands, or using a microscope) that causes the head to be held in one position for a long time without moving
- Sleeping in an abnormal position or in a cold room
- Eye strain
- Fatigue
- Overexertion
- Head or neck injury, even years after the injury
- Clenching jaw or grinding teeth, which can cause a condition known as Temporomandibular Joint (TMJ)
   Dysfunction, can also cause muscle contraction around the temples, neck, and shoulders, spreading to the head and resembling tension headaches

· Pain that originates from other areas, such as sinuses, can also trigger tension headaches or a combined sinus/tension headache

#### **Risk Factors**

- have more tend to Women headaches than men (although, prior to adolescence, boys may get more headaches than girls)
- Changes in estrogen levels such as menstruation and menopause
- Premenstrual syndrome
- Stress
- Chronic overwork
- Too much or too little sleep
- Missed or delayed meals •
- Alcohol or drug use
- Certain foods or food additives may also be a trigger for some people.

#### Diagnosis

Take a detailed history in order distinguish tension headaches from headaches of other causes, such as migraines. Sometimes it helps to keep a diary about headaches prior to seeing the doctor; this way, you'll have an accurate recording of how often they happen and you won't forget the details related to headaches. The physical exam will include assessing head, neck, eyes, and sinuses as well as performance of a neurological examination. Don't be surprised if the doctor asks you some questions to test short-term memory. On exam, the physician is likely to find musculoskeletal tenderness around neck and Tests that doctor may order. scalp. depending on your symptoms and exam. include:

- CT scan or MRI to look for a mass or other brain disorder or to check for sinusitis
- X-ray of the neck to look for arthritis or spinal problems; x-ray of the sinuses to look for sinusitis
- Electroencephalogram (EEG) a brain wave study, looking for any seizure activity
- Lumbar puncture a "spinal tap" done for different reasons, including to rule out any infection like meningitis

**Treatment Approach** 

Unfortunately, as many as 60% of people with tension headaches do not seek the

advice of their physician and simply resort to taking over the counter medications for the pain. This is too bad because a comprehensive treatment plan including relaxation, exercise and other lifestyle changes, and occasional medication can be very effective in significantly reducing the frequency and intensity of headaches. Many of the medications used to prevent or treat tension headaches, however. have risks and side effects. Therefore, using methods that do not include medications are preferred if you are able to successful pain control and reduce the frequency of headaches. Biofeedback, yoga, and relaxation techniques, for example, can be quite effective for both acute relief and decreased headache frequency. Regular exercise can also reduce how often you get a tension headache.

### Lifestyle

Keeping a headache diary, particularly when you first begin to experience headaches, can identify the source of headaches and how to modify environment and habits to avoid headaches. When a headache occurs, write down the date and time the headache began. Note what you ate for the preceding 24 hours, how long you slept the night before, what you were experiencing just before the headache, any unusual stress in your life, how long the headache lasted, and what you did to make it stop. Good health habits, as listed below, are important for helping to lessen stress and tension headaches:

- Adequate sleep
- Eating a healthy diet
- Exercising regularly
- Quitting smoking
- Choose from a variety of relaxation techniques

## Medications

Medications are used both to treat the pain from a headache at the time that you have it (acute therapy) and to prevent the headaches from coming if you are a person who gets them frequently (chronic therapy).

## Acute pain control:

- Acetaminophen
- Aspirin
- Ibuprofen
- Naproxen

Another medication that your doctor might consider is called isometheptene. Rarely, if headaches are very severe and nothing else relieves the pain, physician may consider prescribing opiods like codeine hydrocodone.

Prevention of chronic, recurrent tension headaches:

- Tricyclic antidepressants, such as amitriptyline, imipramine, desipramine, and nortriptyline, may be used; generally, relaxation techniques and cognitive behavioral therapy are encouraged first, before this class of medication considered as an adjunct to these techniques, especially in children.
- Consider other antidepressants as well, including monoamine oxidase inhibitors (MAOIs such phenelzine and tranylcypromine), serotonin-reuptake selective inhibitors (SSRIs like fluoxetine, sertraline, paroxetine, fluvoxamine, citalopram), bupropion, and nefazodone, or venlafaxine.
- Anti-anxiety agents, like alprazolam or clonazepam, might be prescribed for a short period of time decrease muscle tension or to treat anxiety symptoms during periods of extreme stress.

Surgery and Other Procedures

If an injury or problem in the cervical spine is contributing to tension headaches, a nerve using a steroid to inflammation and muscle contraction, may be considered to lessen the head pain.

## **Nutrition and Dietary Supplements** Diet

Certain foods can trigger tension headaches; these include:

- Chocolate
  - Cheese
- Monosodium glutamate (MSG), a flavor enhancer

The following a diet that is rich in fruits and vegetables, whole grains, and uses fish and soy for protein instead of red meat may help lessen the frequency and intensity of headaches.

Magnesium

Magnesium levels tend to be lower in those with headaches, both migraines and tension

types. Low levels of magnesium may trigger muscle tightness and pain. Therefore, if you suffer from frequent tension headaches, consider, together with physician, taking magnesium supplements and carefully keeping track of whether headaches happen less often or are less severe.

## Vitamin B Complex

Vitamin B complex is considered to be an anti-stress agent and, therefore, potentially helpful to take if you experience tension headaches.

## 5-hydroxytryptophan (5-HTP)

5-hydroxytryptophan (5-HTP) is an amino acid. The body makes 5-HTP from tryptophan and converts it to an important brain chemical known as serotonin. 5-HTP dietary supplements help raise serotonin levels in the brain, which may have a positive effect on sleep, mood, anxiety, aggression, appetite, temperature, sexual behavior, and pain sensation. 5-HTP supplements may be effective in children and adults with various types of headaches including tension, but more research is needed before knowing its safety and effectiveness.

## Herbs

Cayenne (Capsicum frutescens/Capsicum spp.)

Capsaicin, a substance found in cayenne pain-relieving powerful has pepper, properties when applied topically. To recurrent headaches, chronic, including tension and cluster headaches (a severe one-sided headache that tends to occur in clusters, happening repeatedly every day at the same time for possibly several weeks), capsaicin is placed inside the nose.

piperita) (Mentha x Peppermint When applied topically to the forehead and temples, peppermint has the ability to relieve tension headaches and may comparable to acetaminophen.

#### Others

Although studies are lacking, specialist to treat different types headaches, including tension, has used the following herbs clinically:

- Dong quai (Angelica sinensis)
- Devil's claw (Harpagophytum procumbens)
- Ginkgo biloba (Ginkgo biloba)

- Jamaica dogwood (Piscidia erythrina/Piscidia piscipula)
- Lavender (Lavandula angustifolia)
- Linden (Tilia cordata/platypus)
  flowers
- Skullcap (Scutellaria lateriflora)
  - Willow bark (Salix spp.)

#### Acupuncture

Acupuncturists diagnose tension headaches by paying careful attention to the kidney and its associated meridians, as well as liver and gallbladder meridians. The physical location of the headache also helps the acupuncturist to determine an appropriate treatment plan, which may include lifestyle/dietary changes or herbal remedies. Acupuncture is safe and that headache patients who wish to try this therapy should not be discouraged from doing so.

Chiropractic

Spinal manipulation is commonly used to treat tension headaches, especially tension headaches that originate from the neck. Evidence supporting the use of tension headaches that originate in the neck is quite clear; however, studies examining the effectiveness of spinal manipulation for other types of tension headaches have been less conclusive. In one very important study, individuals with tension headaches were randomly assigned to receive either spinal antidepressant manipulation or an medication. Both groups experienced significant improvement while they were being treated. When treatment was stopped, however, the beneficial effects of spinal manipulation lasted longer than did the effects of the antidepressant medication.

Massage and Physical Therapy

Stretching exercises for the head and neck, taught by a physical therapist, and receiving massages regularly can help reduce the duration of and tension frequency Stretching frequently headaches. particularly important if your work involves typing or using a computer. Learning proper posture is another important factor in reducing your number of headaches; a teach therapist can physical Reflexology (a type of massage in which specialized thumb and finger techniques are applied to the hands and/or feet at points that correspond to specific organs and structures throughout the body) may be an

especially valuable technique for treating and preventing headaches. Other techniques that some clinicians recommend include aromatherapy (the use of essential oils from plants, often together with massage, for healing purposes) and Reiki (an energy balancing technique) treatments.

Homeopathy

- Belladonna— for throbbing headaches that come on suddenly; symptoms tend to worsen with motion and light, but are partially relieved by pressure, standing, sitting, or leaning backwards.
- Bryonia— for headaches with a steady, sharp pain that occurs most often in the forehead but may radiate to the back of the head; symptoms tend to worsen with movement and light touch, but firm pressure alleviates the pain; the person for whom this remedy is most appropriate is usually irritable and may experience nausea, vomiting, and constipation.
- Gelsemium— for pain that extends around the head and feels like a tight band of constriction; pain usually originates in the back of the head and may be relieved following urination; this remedy is most appropriate for individuals who feel extremely weak and have difficulty keeping their eyes open.
- Ignatia— for pain that may be described as a feeling of something being driven into the skull; these types of headaches tend to be triggered by emotion, including grief or anxiety, and the treatment is appropriate for both children and adults
- Iris versicolor— for throbbing headaches that occur on one side of the head, especially after eating sweets; visual disturbances may also occur; these headaches are worse in the early morning, during spring and fall, and symptoms tend to worsen with vomiting.
  - Lachesis— for headaches that tend to occur on the left side of the head; symptoms are typically worse in the mornings, before menstruation, and

with exposure to warmth and sunlight; symptoms tend to improve with open air and firm pressure.

- vomicaheadaches for Nux associated with hangovers, overindulgence in foods or alcohol, and overwork; these types headaches are often accompanied by nausea and/or dizziness; this remedy is most appropriate individuals who tend be constipated and irritable.
- Pulsatilla— for headaches triggered by eating rich, fatty foods, particularly ice cream; pain tends to move but may be concentrated in the forehead or on one side of the head and may be accompanied by digestive problems or occur around the time of menstruation; children for whom this remedy is appropriate often develop these symptoms while at school.
- Sanguinaria— for right-sided headaches that begin in the neck and move upwards, recur in a predictable pattern (such as every seven days); pain is aggravated by motion, light, or sun exposure, odors, and noise; this remedy is appropriate for children who may have a craving for spicy or acidic foods, despite having a general aversion to eating due to the headache.
  - Spigelia— for stinging, burning, or throbbing sinus pain that often occurs on the left side of the head; symptoms tend to worsen with cold weather and motion but may be temporarily relieved by cold compresses and lying on the right side with the head propped up.

#### Mind/Body Medicine

Can do many things to avoid tension headaches or relieve the pain:

- Biofeedback to control muscle tension.
- Learn to meditate, breathe deeply, or try other relaxation exercises, such as yoga or hypnotherapy.
  - Cognitive Behavioral Therapy

Other relaxation techniques that may be helpful include:

- Guided imagery
- Hypnosis

## Other Considerations Pregnancy

Some women who are prone to headaches will get them more often when they are pregnant. Other women, however, experience fewer headaches during pregnancy, especially during the second trimester.

## **Warnings and Precautions**

It is important to use medications only as directed. Rebound headaches may occur from overuse of medications and complications may occur from side effects of medications.

## **Prognosis and Complications**

Serious underlying conditions due to headaches, like a tumor or a stroke, are extremely uncommon, despite the fact that many worry about these possibilities. Situations that may indicate a serious problem include the following:

- Sudden and severe headache that persists or increases in intensity over 24 hours
- A sudden, severe headache that you describe as "your worst ever," even if you are prone to headaches
- Chronic or severe headaches that begin after age 50
- Headaches accompanied by memory loss, confusion, loss of balance, change in speech or vision, or loss of strength in or numbness/tingling in any one of your limbs
- Headaches after a head injury, especially if you are also drowsy or feel nauseated
- Headaches accompanied by fever, stiff neck, nausea and vomiting (may indicate meningitis)
- Severe headache localized to one eye, accompanied by redness of the eye (may indicate acute glaucoma)

The good news is that over 90% of people with tension headaches can get significant relief from a combination of lifestyle change, relaxation, and medication.

## 154. Thyroiditis; Thyroid Inflammation

Thyroiditis is an inflammation of the thyroid gland. There are several types of thyroiditis, but each of them generally produces three phases: overactive thyroid underactive (hyperthyroidism), (hypothyroidism), and return to normal. It usually takes one year to complete this cycle. Young to middle-aged women seem most at risk, although some forms of thyroiditis are seen in both men and women some ages. With hypothyroidism may develop years later even if the thyroiditis has resolved.

Signs and Symptoms

Depending on the type of thyroiditis, the thyroid gland can have one of the following characteristics.

- Firm and enlarged, but not tender
- Enlarged and painful, with pain extending to the jaw or ears
- Enlarged but not painful; enlarged on only one side, hard like a stone, and sticking to other neck structures

You may also have one or more of the following symptoms.

- Cool, dry skin, slow pulse rate (less than 60 beats per minute), swelling around the eyes, hoarseness, or slow reflexes
- No desire to eat, feeling tired and unenergetic, and a slight fever
- heartbeat, rapid slight nervousness, anxiety, weight loss of 5 to 10 pounds, and increased sweating

## What Causes It?

Thyroiditis can be caused by immune disorders, viruses, and fever disorders. Sometimes thyroiditis develops in Graves' disease. In some cases, there is identifiable cause.

## What to be done

Physician will feel neck to see what the thyroid gland feels like and may order blood tests to check the levels of thyroid hormones and other factors. Give pain medication or something to help to feel more normal.

**Treatment Options** 

Thyroiditis generally involves three phases: overactive phase, underactive phase, and

Treatment normal. is to return individualized to type and phase.

## **Drug Therapies**

Depending on the particular type of thyroiditis, a physician may prescribe one or some of the following treatments:

- Levothyroxine: 0.1 to 0.15 mg daily if hypothyroidism or large goiter present
- Aspirin: two tablets (325 mg) three to four times daily as needed to relieve pain and inflammation
- Corticosteroid medications (such as prednisone or dexamethasone): at lowest dose that relieves pain; gives relief in 24 hours, but continue 4 to 6 weeks after pain is gone; severe cases only
- Propranolol: 10 to 40 mg every six hours for thyrotoxic symptoms
- Thyroxine: 0.05 to 0.1 mg/daily for hypothyroidism symptoms
- for beta-blockers: Short-term hyperthyroid symptoms
- Antibiotics

## Surgical and Other Procedures

Partial thyroid removal: to relieve pressure

#### Alternative and Complementary **Therapies**

Alternative therapies can help when used provider medications with the prescribes.

## Nutrition

- Foods that depress thyroid activity brussels are broccoli, cabbage, sprouts, cauliflower, kale, spinach, turnips, soy, beans, and mustard greens. These foods should included in the diet for hyperthyroid conditions and avoided hypothyroid conditions.
- Avoid refined foods, sugar, dairy products, and wheat, caffeine, alcohol.
- Essential fatty acids are antiinflammatory and necessary hormone production. Take 1,000 to 1,500 mg flaxseed oil three times per day.

 Calcium (1,000 mg per day) and magnesium (200 to 600 mg per day) help many metabolic processes function correctly.

#### Herbs

For hyperthyroid conditions:

- Bugleweed (Lycopus virginica) and lemon balm (Melissa officinalis) help normalize the overactive thyroid.
- Motherwort (Leonurus cardiaca) relieves heart palpitations, and passionflower (Passiflora incarnata) reduces anxiety. Combine two parts of bugleweed with one part each of lemon balm, motherwort, and passionflower in a tincture, 30 to 60 drops three to four times per day.
- Quercetin (250 to 500 mg three times per day) is an antiinflammatory.
- Turmeric (*Curcuma longa*) makes the effect of bromelain stronger and should be taken between meals, 500 mg three times per day.
- Ginkgo biloba, 80 to 120 mg two times per day.

For hypothyroid conditions:

• A combination that supports thyroid function includes herbs rich in minerals. Combine the following for a tea (3 to 4 cups per day) or tincture (20 to 30 drops three times a day): horsetail (Equisetum arvense), oatstraw (Avena sativa),

alfalfa (Medicago sativa), gotu kola (Centella asiatica), and bladderwrack (Fucus vesiculosus).

### Homeopathy

Homeopathy may be useful as a supportive therapy for both "hyper" and "hypo" conditions of the thyroid.

## Physical Medicine

For hyperthyroid conditions:

• Ice packs to the throat will help decrease inflammation.

For hypothyroid conditions:

- Contrast hydrotherapy. Alternate hot and cold applications to the neck and throat. Alternate three minutes hot with one-minute cold. Repeat three times to complete one set. Do two to three sets per day.
- Exercise helps improve thyroid function.

## Acupuncture

Acupuncture may be helpful in correcting hormonal imbalances and addressing underlying deficiencies and excesses involved in thyroiditis.

### Massage

Therapeutic massage may relieve stress and increase the sense of well being.

#### Follow up

Physician may need to check each year.

## **Special Considerations**

If you are pregnant or just had a baby, you may develop Hashimoto's thyroiditis.

# 155. Transient Ischemic Attacks; TIAs (TIAs)

Transient ischemic attacks (TIAs), sometimes called "mini-strokes," are caused by temporary reduction of blood flow to the brain. Generally, TIAs occur when platelets in the blood clump together in arteries, blocking blood flow. Symptoms usually last only 10 to 15 minutes and clear up within 24 hours. TIAs sometimes happen before strokes, and they are considered a warning sign of stroke.

Signs and Symptoms

- Blurred vision in both eyes, brief blindness, or double vision
- Difficulty speaking

- Weakness, sometimes on only one side of the body
  - Vertigo (a whirling or spinning feeling)
  - Strange sensations, such as burning or tingling
  - Trouble with coordination; clumsiness
  - Loss of consciousness
  - Temporary memory problems
  - Headache

## What Causes It?

TIAs are commonly caused by emboli. These may include clumps of platelets and fibrin, plaque that has collected in your arteries, or blood clots. TIAs include a weakened, bulging heart wall (ventricular aneurysm); rapid, irregular heartbeat (atrial fibrillation); narrowing of the carotid artery together with low blood pressure; and blood clotting problems.

## Who's Most At Risk?

- Over 65 years of age
- Male
- Family history of TIA
- High blood pressure
- High cholesterol
- Heart disease
- History of stroke
- Diabetes
- Smoking .
- Heavy alcohol consumption
- Lack of regular physical exercise
- Hypercoagulability—an that increases condition likelihood of developing blood clots, including during pregnancy

#### What to be done

Perform tests, such as blood tests, computed tomography (CT) scan or resonance imaging (MRI) of head, or ultrasound of the blood vessels to your brain. If the ultrasound shows some blockage, provider may consider a test called an angiogram to view the blood vessels more clearly.

## **Treatment Options**

#### Prevention

You can take the following steps to help prevent TIA:

- Don't smoke.
- Get regular exercise, eat a healthy diet, and maintain a healthy weight.
- Don't drink alcohol excessively.
- · Control high blood pressure, high cholesterol, or diabetes.
- To treat carotid artery disease, coronary artery disease, irregular heartbeat, congestive heart failure. or heart valve disease.
  - hormone replacement Stay on therapy.

## Treatment Plan

Need oxygen to help easy breath and to lessen the effects of blocked blood flow.

## **Drug Therapies**

To help prevent TIA, stroke, or heart attack. your provider may prescribe antiplatelet agents, or anticoagulants. These include clopidogrel. ticlopidine, aspirin, dipyridamole, and warfarin.

## Surgical and Other Procedures

If carotid artery is narrowed, your provider may recommend a type of surgery called carotid endarterectomy to clean deposits from inside the artery. While examining provider may artery, angioplasty (inserting a balloon, a tube-like structure called a stent, or another device into artery to open it). Depending on condition, provider may recommend an extracranial-intracranial bypass, surgery that connects a blood vessel outside skull with a blood vessel inside to improve blood flow.

#### Complementary and Alternative **Therapies**

Diet is very important in preventing and treating blood vessel diseases. nutrients and herbs may protect against injury from reduced blood flow and damage from oxidation. Acupuncture plays a role in the circulation of blood in your head and in reducing adverse effects when blood flow returns.

#### Nutrition

Study showed that among men aged 45 to 65 years with no known history of vascular disease, those who ate more fruits and vegetables had a lower risk of stroke and TIAs. Homocysteine levels would be a good predictor of stroke risk. Folic acid (vitamin B<sub>9</sub>), vitamin B<sub>6</sub>, vitamin B<sub>12</sub>, and betaine affect body's use of homocysteine. Taking these supplements may help control homocysteine levels. Studies suggest that taking magnesium through dietary sources (such as green leafy vegetables, whole grains, nuts and seeds, tofu, oatmeal, bananas, potatoes, and molasses) may be useful. The supplement acetyl-L-carnitine improved blood flow around, but not directly in, the affected site in the brain. This supplement may help prevent TIAs for high-risk patients and/or may prevent further brain damage for those who have already suffered a TIA or an ischemic stroke.

Vitamin E helps prevent platelets from sticking together, which improves blood and take either aspirin

combination of aspirin and vitamin E. Those taking the combination had fewer platelets collecting in blood vessels and improved blood flow.

Vitamin B<sub>3</sub> Results showed the treatment protected the nerve cells and reduced damage from the TIA.

## Herbs

Ginkgo (Ginkgo biloba) appears to increase circulation in the head, helps the brain tissue tolerate lack of oxygen, controls brain swelling, improves brain function, protects nerve cells, lessens the likelihood of platelets collecting in blood vessels and preserve the brain membrane. Oren-gedokuto (TJ15), a Chinese herbal preparation, reduced nerve cell damage in mice with reduced blood flow to the brain.

Homeopathy

Scientific literature does not support the use of homeopathy for TIAs.

Acupuncture

In a study of patients with cerebrovascular disease, electrical stimulation of the needles during acupuncture caused improvement in blood flow to the brain compared to acupuncture alone. Pointed massage on acupuncture points improved blood flow in the head in patients with brain disorders due to poor circulation and a history of TIAs in the vessels supplying blood to the back of the head.

#### Chiropractic

Chiropractors do not treat TIAs, and high velocity manipulation of the upper spine is considered inappropriate in individuals who are taking blood-thinning medications or other medications used to reduce the risk of stroke.

**Prognosis/Possible Complications** 

Narrowing of the carotid arteries also indicates likelihood of suffering a stroke. The location or duration of symptoms does not appear to be indications of stroke risk. TIAs are a warning sign of stroke. But more patients with TIA die from heart attack than stroke. If you have a stroke and are not treated right away, you may be more likely to have complications, such as pneumonia, dehydration, or hypothermia, skeletal muscle problems. Damage to the brain stem may lead to breathing problems. Bleeding or swelling in the head may occur days after a stroke. Multiple strokes increase the risk of seizure, blood clots to the legs or lungs, and impaired memory or judgment.

Follow up

advice on getting Follow provider's checkups after a TIA to prevent stroke and heart attack. In people who have strokes after TIAs, half the strokes occur within a year, and 20% occur within 5 months.

## 156.Tuberculosis (TB)

Tuberculosis (TB) is a bacterial disease that mainly affects the lungs. In 15% of patients it affects other areas, causing nodes, pleurisy, lymph meningitis. It may also affect the kidneys, urinary tract, genitals, thyroid, bones, and joints. TB in the lungs or throat is the most infectious form. In 1993 the World Health Organization called tuberculosis a "global emergency," with an estimated 8 million new cases of tuberculosis each year. Even though there has been an effective public health campaign to stem the tide of rising tuberculosis rates since 1993, it remains one of the most serious public health challenges.

Signs and Symptoms

Usually there is a time delay between infection and the development of full-blown TB. Many who are infected with TB never develop the disease. But in others, especially those with weakened immune systems, the bacteria become active. It is also common for those who are infected to be asymptomatic for several months to years. The type of symptoms will depend on where in the body the TB bacteria are growing. Typically, TB bacteria that grow in the lungs may cause:

- Mild fever, headache, chills, night sweats
- Malaise (feeling unwell), fatigue
- Loss of appetite, weight loss
- Cough, with or without mucus and . pus
- Coughing up blood .
  - Chest pain from pleurisy
- Difficulty breathing -
- Swollen glands .

#### What Causes It?

Mycobacterium tuberculosis causes most cases of TB. This bacterium only lives in humans. Two other bacteria cause TB. They are M. bovis and M. africanum. M. bovis is transmitted by milk from infected cows. Those already infected with M. tuberculosis, M. bovis, or M. africanum are most likely to develop active TB within two years of exposure. TB is spread from one person to another through airborne bacteria. Typically what happens is that a person with TB in the lungs or the throat coughs or sneezes; then, others nearby breathe in the bacteria.

## Who's Most At Risk?

Because TB is only spread through inhalation of infected respiratory particles in the air, you are not likely to contract the infection such as handshakes or sharing of dishes and utensils. Another important fact to remember is that people with TB are most likely to spread it to people with whom they spend the most time—family members, friends, classmates, and co-workers. Those at risk for developing TB include:

- Those who work in the healthcare professions or as embalmers
- Those who were born in or have spent time in a country where TB is common.
- Those who live in settings where TB is common (e.g., homeless shelters, migrant farm camps, prisons and jails, and some nursing homes or long-term care facilities)
- Those who are infected with human immunodeficiency virus (HIV)
- Those following therapy that suppresses the immune system
- Those who have no or inadequate access to healthcare

## What to be done

If you are infected with TB, you should expect a physician to perform an exam and ask about symptoms. He or she will use a stethoscope to pick up unusual breathing sounds, such as bubbling or crackling noises when you inhale after a cough or a hollow blowing sound when breathe. These may indicate lung-related disease, but physician will need to do other tests specifically for TB. A skin test and tests of sputum or of fluid or tissue samples may also confirm infection with TB-causing bacteria. Finally,

a chest X ray may show signs of TB in the lungs.

# **Treatment Options Prevention**

- Prevention of TB begins with rapid diagnosis and treatment to avoid spread to noninfected persons.
- Those at risk for developing TB following exposure may be given the medication isoniazid to prevent TB.
- In countries where TB is common, a vaccine called BCG may be administered.

#### Treatment Plan

If suspicious of TB, physicians may begin treatment before all lab tests return, including prescribing more than one anti-TB drug. Emergency treatment may be necessary if, for example, coughing up blood.

### **Drug Therapies**

TB bacteria die very slowly. It takes at least 6 months for the medicine to destroy all of the TB bacteria. If TB is positive, need to take several different drugs, usually for six to nine months. Treatment lasts longer for those who have HIV or have active TB outside of the lungs. You will be tested first for drug resistance to determine the most effective combination of drugs to prevent the bacteria from becoming resistant to the drugs. The most common drugs used to fight TB are:

- Isoniazid (INH)
- Rifampin
- Pyrazinamide
- Ethambutol
- Streptomycin

#### **Surgical Procedures**

Surgery may be needed to repair bone and joint problems caused by TB that has spread to those areas.

# Complementary and Alternative Therapies

While it is tempting to think that establishing good nutrition may restore damaged immune function or that dietary supplements may prevent TB infection, effective control of TB depends on appropriate use of medications.

#### Nutrition

Patients at risk for vitamin deficiency (malnourished, alcoholics, elderly, pregnant and nursing mothers) or for nerve degeneration (those with diabetes, HIV, or chronic kidney failure) may need vitamin B<sub>6</sub>. A diet lacking in certain nutrients may be linked to abnormalities in immune function, resulting in a poor response to TB and to the BCG vaccine, especially among the elderly, children, alcoholics, the homeless, and HIV-infected individuals. These nutrients include:

- Protein
- Zinc
- Vitamin B<sub>12</sub>
- Vitamin C
- Vitamin D

The omega-3 fatty acids appeared to impair the animals' immune systems, diminishing the ability to kill certain organisms including *M. tuberculosis*. While it is unclear how this animal study will translate to humans, it may be wise to avoid foods rich in omega-3 fatty acids.

#### Herbs

### Garlic (Allium sativum)

The antibacterial properties of garlic are fairly well documented. In vitro studies have demonstrated that garlic extract inhibits the growth of many species of bacteria. However, high concentrations of garlic extract were needed to slow down the growth of *M. tuberculosis*. While further study is needed, a recent animal study indicated that garlic oil also inhibited *M. tuberculosis*, reducing TB lesions. A combination of garlic extract or garlic oil with anti-TB drugs may eventually prove effective against the disease.

Other herbs that may be helpful include:

- Echinacea (Echinacea spp.)
- Tamarisk (Tinospora cordifolia)
- Elecampane (Inula helenium)—
   used traditionally by native
   American Indians for lung
   disorders, including TB
- Barberry (Berberis vulgaris) used traditionally in Egypt and in modern day Iran for lung infections such as TB
- Sweet coneflower (Rudbeckia subtomentosa)—test tube studies suggest that active components of this herb inhibit the growth of M. tuberculosis

### Homeopathy

- Arsenicum album —for cough and chest pain, particularly from infectious causes; symptoms worsen at night and are often accompanied by fever, chills, weakness, exhaustion, and restlessness; this remedy is most appropriate for individuals who often feel scared and anxious
  - Calcarea carbonica —for chills, drowsiness, perspiration (especially at night), and swollen lymph nodes; this remedy is particularly appropriate for individuals who are susceptible to infection, tend to be stubborn, and crave eggs and cold drinks

## Prognosis/Possible Complications

A full course of medication can cure TB in those who do not have a drug-resistant strain. The outcome may be less promising in patients who are elderly, those who have TB that has spread to locations other than the lungs including miliary TB (which spreads through the bloodstream affecting many organ systems), drug-resistant strains of TB, or those with HIV.

Possible complications of TB include:

- Development of a drug-resistant strain
- TB beyond the lungs, frequently associated with HIV
  - TB-related meningitis, in children
  - Pneumothorax
  - Massive coughing up of blood

#### Follow up

The elderly and those who are acutely ill or have drug-resistant TB should be hospitalized for at least the first few days of treatment. It is essential to take all TB medication exactly as prescribed in order to cure TB and prevent drug resistance. Any adverse drug reactions should be reported to physician right away. Sputum samples are collected and tested monthly. If tests are still positive after three months of treatment, the infection is considered drug resistant and a change in medications is in order.

## **Special Considerations**

• Infants born to mothers with infectious TB should be separated from the mother until she is no longer contagious. The infant

should then be tested for TB at four to six weeks and three to four months.

 Women can be treated for TB during pregnancy and while breastfeeding but should avoid streptomycin and pyrazinamide.

## 157.Ulcerative colitis; Inflammatory Bowel Disease (UC)

Ulcerative colitis (UC) is a chronic disease that causes inflammation and ulcers in the innermost layers of the large intestine. UC is an inflammatory bowel disease (IBD), the general name for diseases that cause inflammation in the intestines. In UC, swelling typically occurs in the rectum and lower colon, but the inflammation can spread throughout the entire colon. The ulcers bleed and produce pus and mucus, and the inflammation causes the colon to empty frequently, resulting in diarrhea. Although the condition most commonly affects those between the ages of 15 and 35, children and older adults may also develop the disease. Although most people with UC can be successfully treated without surgery. roughly 25% will need a colectomy.

## Signs and Symptoms

The most common signs and symptoms of UC include abdominal pain and bloody diarrhea. The symptoms can range from mild to severe and may come on either very suddenly or more gradually. Other common symptoms of UC include:

- · Frequent, even continuous diarrhea
- Bloody stool
- Urgent desire to defecate
- Abdominal cramps and pain
- High fever
- Rapid heartbeat
- Weight loss
- Anemia
- Loss of appetite
- Joint aches

People with UC are at increased risk for malnutrition. UC can also cause a host of other problems, including arthritis, eye infections, liver disease, skin rashes, blood clots, or gallstones.

#### Causes

UC is caused by a variety of factors ranging from genetics, faulty immune system reactions, stress, environmental influences, and even diet. In some cases, stressful events or sensitivities to certain foods may trigger symptoms of UC.

#### **Risk Factors**

- Family history of UC
- Jewish heritage, especially Ashkenazi Jews
- A diet high in sugar, cholesterol, and fat (particularly meat and dairy products)
- Stress

#### Diagnosis

Blood tests may reveal a high white blood cell count. Stool samples may indicate whether there is bleeding or infection in the colon or rectum. A procedure called colonoscopy-in which an endoscope is inserted into the anus to enable investigation of the inside of the colon and rectum-may be performed. A colonoscopy can reveal any inflammation, bleeding, or ulcers on the colon wall. Tissue samples (biopsies) may colon taken from the wall examination under a microscope in order to make a definitive diagnosis of UC.

#### **Preventive Care**

A daily dose of sulfasalazine, one of the most common medications used to treat UC, is an effective means of reducing the number of UC relapses. Diet (especially a low-fat diet rich in fruits. fluids. magnesium, and vitamin C), exercise, and stress reduction techniques (including hypnosis) may also help prevent recurrences. Supplements and herbs are used successfully to treat UC.

## **Treatment Approach**

The primary goal in treating UC is to control inflammation and replenish lost nutrients. More severe cases of UC may require surgery. Many people with inflammatory bowel diseases such as UC commonly turn to complementary and alternative remedies. Studies indicate that lifestyle changes, including stress reduction, dietary adjustments, specific herbs and supplements (such as psyllium and Salai

guggal) and Mind/body techniques can help prevent and/or treat the disease.

Lifestyle

People with UC report that stress worsens symptoms. Therefore, relaxation techniques, such as yoga, tai chi, and worth meditation are considering, particularly chronic stress in their lives. Exercise may also be very helpful for those with UC. It is especially important for people with UC to drink one to two glasses of water before exercising and one glass of twenty minutes every water exercising to prevent dehydration. Exercise should be avoided during symptom flareups or if the individual has a fever.

#### Medications

- Sulfasalazine-the most commonly used medication for UC; taken orally; decreases inflammation, reduces frequency of recurrences
- Mesalamine-decreases inflammation; taken orally or as an enema
- Corticosteroids-reduce
   inflammation by decreasing the
   production of prostaglandins (fatty
   acids that produce pain and
   inflammation); taken orally, given
   intravenously in severe cases, or
   may be prescribed as an enema
- Medications that suppress the immune system (such as azathioprine and cyclosporine)
- Antibiotics

Medications used to treat diarrhea (such as diphenoxylate, loperamide, or opiates) must be used only under medical supervision and with extreme caution. These medications slow down the normal movements of the gastrointestinal tract and, in severe cases of UC, may cause a complication known as toxic megacolon.

Surgery and Other Procedures

Approximately 20% to 30% of people with UC must eventually have their colons removed (colectomy) because of massive bleeding, severe illness, rupture of the colon, or the risk of cancer. There are several different types of surgery available for UC, and choosing the appropriate surgery depends on the severity of the disease and the individual's needs, expectations, and lifestyle.

Many people with UC must have a proctocolectomy-a procedure in which the colon, anus, and rectum are surgically removed. The surgery cures UC, and removes any risk of colon or rectal cancer. When the intestines are removed, however, the body needs a new way for waste to leave the body so the surgeon creates a small opening (stoma) in the abdomen for stool to pass through. A pouch is worn over the opening to collect waste, and the individual empties the pouch as needed. Different types of procedures may be performed depending on which parts of the intestines are involved:

- Ileostomy-colon and rectum are removed and the surgeon attaches the bottom of the small intestine to the stoma; waste travels through the small intestine and exits the body through the stoma
- Colostomy-rectum is removed and the surgeon attaches the colon to the stoma (a temporary colostomy may be performed when part of the colon is removed and the rest needs to heal)
- Ileorectal and ileoanal reservoir of colon surgery-diseased part and/or rectum is removed and the surgeon creates an internal pouch from the small intestine; waste is stored in the pouch and passed through the anus in the usual manner; bowel movements occur more frequently (on average, 5 to 7 risks include day); times per leakage of stool at night and infection of the pouch

# Nutrition and Dietary Supplements Diet

- A bland, low-fiber diet is best during acute flare-ups.
- Regular intakes of fruits and vegetables, and lowered fat and sugar consumption when UC is not active may reduce the likelihood of flare-ups.
- High intakes of fluids and foods rich in magnesium and vitamin C on a regular basis may lower the risk of developing inflammatory bowel diseases.

- Certain foods may aggravate symptoms of UC (including chocolate, dairy products, fats, and artificial sweeteners) and should be avoided by people with the condition.
  - After surgery, people with UC should avoid foods high in organic acids known as oxalates (for example, spinach, rhubarb, beets, coffee, tea, diet sodas, and chocolate) because oxalates can increase the risk of kidney stones.

People with significant malnourishment, severe symptoms, or those awaiting surgery may require total parenteral nutrition

# Vitamins and Minerals

**Omega-3 Fatty Acids** 

Fish oil supplements containing omega-3 fatty acids may reduce symptoms of UC and prevent recurrence of the condition and particularly valuable when used in combination with sulfasalazine or other medications.

#### Vitamin B9 (Folate)

Low levels of folate may be due, at least in part, to sulfasalazine use. Folate deficiencies contribute to the risk of colon cancer in those with UC.

#### N-acetyl glucosamine

N-acetyl glucosamine supplements or enemas may improve symptoms of UC in children with IBD who did not improve after using other treatments.

#### **Probiotics**

Probiotics, or "good" bacteria such as *lactobacillus*, may improve symptoms of UC and help prevent flare-ups.

#### Bromelain

Bromelain has properties that both reduce inflammation and help digestion. In theory, therefore, this supplement may prove beneficial for people with ulcerative colitis.

#### Herbs

# Psyllium seeds (Plantaginis ovatae)

The fiber-based supplement may be as effective as the medication in decreasing recurrences of the disease. A professional herbalist may also recommend the following herbs to reduce inflammation and diminish abdominal cramps associated with UC:

Marshmallow root (Althaea officinalis)

- Siberian ginseng (Eleutherococcus senticosus)
- Turmeric (Curcuma longa)
- Ginger (Zingiber officinale)
- Green tea (Camillia sinensis)
- Bromelain (Ananas comosus)
- Wild yam (Dioscorea villosa)
- German chamomile flower (Matricaria recutita)
- Yarrow (Achillea millefolium)

# Mind/Body Medicine

Hypnosis

Studies have shown that hypnosis improves immune function, increases relaxation, decreases stress, and ease feelings of anxiety.

#### Ayurveda/Siddha

Salai guggal (Boswellia serrata)

Salai guggal is a traditional Ayurvedic therapy used to treat symptoms of IBD. This remedy may prove to be as effective as sulfasalazine for the treatment of UC. Side effects of salai guggal use include nausea, abdominal fullness, stomach pain, and anorexia.

#### Other Considerations Pregnancy

Fifty percent of women in remission experience a recurrence of UC when they become pregnant, usually during the first trimester or during the postpartum period. For this reason, such women should continue maintenance therapy under the guidance of their healthcare practitioner. Corticosteroids or sulfasalazine considered safe during this time because these drugs do not harm the fetus. Pregnant women with UC do not have increased risk for stillbirths or premature deliveries. Pregnant women should avoid high doses of vitamins. An obstetrician can provide instructions regarding appropriate multivitamin use during pregnancy.

# **Warnings and Precautions**

People with UC should avoid herbs that loosen the bowels. These include:

- Buckthorn bark (Rhamnus frangula)
- Cascara sagrada bark (Rhamnus purshiana)
- Senna leaf and senna pod (Senna alexandrina)

People with UC should also avoid the following foods because they worsen symptoms of the disease:

Milk (and milk products)

- Spicy foods
- Fats
- Sugars

Following surgery, people with UC should avoid the following foods as they may increase the risk for kidney stones:

- Spinach
- Rhubarb
- Beets
- Coffee
- Tea
- Diet sodas
- Chocolate

# **Prognosis and Complications**

- Hemorrhage (abnormal bleeding)
- Perforation of the colon
- Narrowing of the colon, which may cause obstruction
- Abscesses (pus-filled pockets of infection) in the colon
- Toxic megacolon (grossly swollen colon that may rupture)
- Colon cancer

- Nutritional problems (including weight loss and reduced muscle mass)
- Joint pain and arthritis (such as ankylosing spondylitis)
- Skin rashes, including erythema nodosum
- infections/inflammation Eve including uveitis
- Mouth ulcers
- Liver damage
- Blood clots
- Depression and anxiety

Although there is no complete cure for UC other than surgical removal of the colon, many people with the disease lead active lives by controlling their symptoms with medication. In fact, drug treatment is effective for about 70% to 80% of all people with the condition. About 45% of all people with UC are free of symptoms at any given time, but most suffer at least one relapse in any 10-year period.

# 158.Urethritis; Urethral Inflammation

infection is Urethritis inflammation of the lining of the urethra, the narrow tube that carries urine out of the body and which, in men, also carries semen. It can affect males and females of all ages; females, however, are at higher risk.

# Signs and Symptoms

In both sexes, and particularly in women, there may be no symptoms of urethritis. When there are, symptoms include the following.

#### In men:

- Burning during urination
- Pus or whitish mucus discharge from the penis
- Burning or itching around the penile opening

#### In women:

- Painful urination
- Unusual vaginal discharge

#### What Causes It?

- other organisms Bacteria and entering the urethra
- Bruising during sexual intercourse (in women)

- Infection reaching the urethra from the prostate gland or through the penis opening
- Bacterial infection after you have taken a course of antibiotics
- Reiter's syndrome
- diseases transmitted Sexually chlamydia, as (STDs), such syphilis, or HIV/AIDS

# What to be done

A physical examination of genitals will be necessary, and laboratory tests will be done on a urine sample and a specimen of mucus taken from inside the urethra and, in women, the vagina.

# **Treatment Options**

- Antibiotics may be prescribed to eliminate the organisms causing the infection.
- All sex partners should be treated.
- recommended abstinence Sexual regimen treatment until completed, as disease can remain active even after symptoms have disappeared.

#### Prevention

- Limit the number of sexual partners
- · Always use condoms
- If experience symptoms or suspect infections, seek treatment immediately and notify all sexual partners

**Drug Therapies** 

Depending on the cause of the infection, a physician may prescribe one of the following treatments:

- Tetracycline (500 mg 4 times a day for seven days)
- Erythromycin (500 mg 4 times a day for seven days; preferred in pregnancy)
- Ceftriaxone (250 mg IM once a day)
- Ofloxacin (400 mg once a day)
- Ciprofloxacin (500 mg once a day)
- Doxycycline (100 mg twice a day for 10 days)
- Metronidazole (2 g orally once a day; don't use during in pregnancy)
- Clindamycin (300 mg orally twice a day for seven days)
- Acyclovir (400 mg orally 3 time a day for 10 days)
- Famciclovir (250 to 500 mg orally twice a day for 10 days)
- Valacyclovir (1,000 mg orally twice a day for 10 days)

# Complementary and Alternative Therapies

Nutrition, herbs, and homeopathic remedies are useful in fighting infection, relieving pain, and strengthening the urinary system.

#### Nutrition

- Eliminate any known food allergens.
- Eliminate refined foods, sweetened fruit juices, caffeine, alcohol, and sugar, which may compromise immunity and irritate the urinary tract.
- Cranberries and blueberries are helpful because they contain substances that stop bacteria from adhering to the urinary tract.
- Vitamin C (250 to 500 mg twice a day) makes your urine more acidic, which keeps bacteria from growing.

- Beta-carotene (25,000 to 50,000 IU per day) is necessary for immune function and healthy mucous membranes.
- Zinc (30 to 50 mg per day) helps immune system.

#### Herbs

Teas provide the best treatment for infectious urethritis because the additional fluid intake helps the "flushing action." Combine two herbs from each of the following categories and drink 4 to 6 cups per day.

Urinary antiseptics fight bacteria and include the following.

- Uva ursi (Arctostaphylos uva ursi)
- Buchu (Agathosma betulina)
- Thyme leaf (Thymus vulgaris)
- Pipissewa (Chimaphila umbellata)

Urinary astringents tone and heal the urinary tract and include the following.

- Horsetail (Equisetum arvense)
- Plantain (Plantago major)
- Cleavers (Galium aparine)

Urinary demulcents soothe the urinary tract and include the following.

- Corn silk (Zea mays)
- Couch grass (Agropyron repens)
- Marshmallow root (Althaea officinalis) is best used alone in a cold infusion. Soak 1 heaping tbsp. of marshmallow root in 1 qt. of cold water overnight. Strain and drink during the day in addition to any other urinary tea.

advanced or infections, recurrent prepare a tincture of equal parts goldenseal (Hydrastis canadensis) and coneflower (Echinacea purpurea). Take 30 drops four to six times per day in addition to the urinary tea. For noninfectious urethritis or for urethritis with severe pain and spasm, add kava kava (Piper methysticum) to any of the above formulas. A periwash may be helpful in reducing pain with urination. Place 1 tsp. of the coneflower/goldenseal tincture in an 8-oz. peri bottle. Fill with water. Rinse off after each time urinate.

#### Homeopathy

- Staphysagria for urinary infections associated with sexual intercourse
- Apis mellifica for stinging pains that are made worse by warmth

- Cantharis for intolerable urging with "scalding" urine
- Sarsaparilla for burning after urination

# Acupuncture

Acupuncture may be helpful in enhancing your body's immune function.

#### Follow up

If urethritis was caused by a sexually transmitted disease, sexual partners may need to be treated as well.

#### **Special Considerations**

STDs can cause permanent damage to reproductive organs and infertility in both sexes. They also can cause difficulties during pregnancy, premature delivery, low birth weight, and infections in newborns.

# 159. Urinary Incontinence

Urinary incontinence is the inability to control urination. It is more common in the elderly and women. Incontinence is classified as stress incontinence (caused by sneezing), laughing, coughing, incontinence (losing urine when suddenly feeling the urge to urinate), overflow incontinence (continually leaking urine), functional incontinence (in people with a brain injury), or transient incontinence (temporary incontinence). Treatment is highly effective in more than 80 percent of cases. Exercise and behavioral therapies are most successful.

#### Signs and Symptoms

- Not being able to hold your urine until you get to a bathroom
- Frequent and unusual urges to urinate

#### What Causes It?

- Stretched pelvic muscles from pregnancy and childbirth
- Low estrogen levels in women
- Enlarged prostate in men
- Side effects of certain medications
- Urinary tract infections (UTIs)
- Frequent constipation
- Damage to or diseases of the brain or spinal cord (for example, dementia, spinal cord injury, multiple sclerosis, stroke)
- Weakened muscles that control urination (urethral sphincter and pelvic-floor muscles)

# What to be done

A physical examination and may ask some questions about past prostate problems, pregnancy, hysterectomy, pattern of urinating, when urine leakage occurs, and whether strain or experience discomfort

when urinate. Ask to cough vigorously to see if it causes urine loss, a sign of stress incontinence. Provider may suggest urine tests to detect infection, urinary stones, diabetes, and other underlying causes. A pelvic ultrasound may be performed to examine bladder, kidneys, and urethra.

### **Treatment Options**

- Exercises: Kegel exercises strengthen muscles that control urination. While increased muscle tone requires long-term exercise, squeezing the muscles just before coughing or sneezing provides initial relief.
- Biofeedback: Electronic devices inserted into the vagina or rectum aid in muscle identification for exercise therapy.
- Relaxation techniques may help you go longer without urinating.
- Habit training helps establish regularity of urination.

Several types of drugs are available to help muscle control. Surgery is also helpful, particularly in women with stress incontinence and for men with an enlarged prostate. Various other options exist as well, such as catheters, urethral plugs, condom catheters, and absorbent pads or underwear.

# Complementary and Alternative Therapies Nutrition

- Eliminate caffeine, alcohol, sweetener substitutes, and simple sugars.
- Cranberries and blueberries contain substances that keep bacteria from adhering to the bladder. This may help prevent infections that can

make incontinence worse, and helps deodorize urine.

- Vitamin C (1,000 mg three times a day) keeps bacteria from growing in urine.
- Beta-carotene (25,000 to 50,000 IU per day) helps your immune system function properly and keeps mucous membranes healthy.
- Zinc (30 mg per day) supports immune function.
- Calcium (1,000 mg per day) and magnesium (500 mg per day) taken together may improve control of the muscles used in urination.

#### Herbs

Urinary astringents tone and heal the urinary tract and can be taken long-term at 1 cup per day or 30 drops tincture per day.

- Horsetail (Equisetum arvense) helps connective tissue integrity.
- Plantain (*Plantago major*) is an astringent and demulcent.

Marshmallow root (Althaea officinalis) is a urinary demulcent, best used alone in a cold infusion. Soak 1 heaping tbsp. of marshmallow root in 1 qt. of cold water overnight. Strain and drink during the day in addition to other teas.

#### Homeopathy

- Causticum for stress incontinence, especially with retention from holding the urine and frequent urges to urinate
- Natrum muriaticum for stress incontinence, vaginal dryness and pain during sex, especially with a history of grief
- Pareira for retention of urine from an enlarged prostate
- Sepia for stress incontinence with sudden urge to urinate, especially with prolapsed uterus and vaginitis
- Zincum for stress incontinence, urinary retention from prostate problems, unable to urinate standing

#### Acupuncture

May help, depending on cause of the incontinence

#### Follow up

Exercise and behavioral therapy are highly successful when closely adhered to. You may need close monitoring by your physician and support from someone close to you to stay committed to these lifestyle changes.

#### **Special Considerations**

If pregnant, consult with physician before taking any medication. For men, regular prostate examinations can detect problems early.

# 160.Urinary Tract Infections (UTIs)

Urinary tract infections (UTIs) are caused by bacteria and are 10 times more common among women than men. About 30 percent of UTIs go away and do not recur. When UTIs do recur, it is often because the treatments used to suppress bacteria seem to work at first, but do not produce a lasting cure. UTIs can also recur when a woman is infected again by a different kind of bacterium.

## Signs and Symptoms

- · Pain or burning when urinating
- The need to urinate more often than usual
- A feeling of urgency when you urinate
- . Blood or pus in the urine

- Cramps or pain in the lower abdomen
- Chills or fever (fever may be the only symptom in infants and children)
- · Strong-smelling urine
- · Pain during sexual intercourse

#### What Causes It?

- A new sex partner or multiple partners
- More frequent or intense intercourse
- Diabetes
- Pregnancy
- Use of irritating products such as harsh skin cleansers
- Use of irritating contraceptives such as diaphragms and spermicides

- Use of birth control pills
- Heavy use of antibiotics
- A blockage in the urinary tract (benign masses or tumors)
- A history of UTIs, especially if the infections were less than six months apart

## What to be done

Physician will feel abdomen and kidneys for changes and use laboratory tests, such as a urine culture, to find out if you have a UTI. If the usual treatments do not work, provider will explore the possibility that you have some other condition. Other illnesses can cause symptoms that mimic a UTI, such as sexually transmitted diseases.

# **Treatment Options Drug Therapies**

Several antibiotics and other drugs are used to treat UTIs. The most effective antibiotics are usually taken for 7 to 10 days. Shorter courses of treatment are available, and physician may prescribe an antibiotic for 1 to 3 days.

#### and Alternative Complementary **Therapies** Lifestyle

- Avoid caffeine, alcohol, and spicy foods that can further irritate the bladder.
- Use several capsules of a probiotic acidophilus) (Lactobacillus regularly.
- Drink 8-10 glasses of water or other fluids each day to dilute bacteria in the urine.
- Eat plain yogurt to help control development of a yeast infection after taking antibiotics for a UTI.
- Cleanse well with soap and water before and after sexual activity. Your partner should do the same.
- Take showers instead of baths.
- Wear cotton underwear and loosefitting clothes.
- For women: if using a diaphragm, thoroughly, rinse, and carefully dry the diaphragm after each use. After using the toilet, always wipe from front to back.

#### Nutrition

Cranberries and blueberries contain substances that inhibit the binding bacteria to bladder tissue. of Drinking unsweetened cranberry

- juice regularly seems to help lower the risk of UTIs and can help cure one if you drink it when you first feel symptoms.
- Vitamin C (250 to 500 mg two times per day) makes urine acidic, which inhibits bacterial growth.
- Beta-carotene (25,000 to 50,000 IU per day) is necessary for immune function and mucous membrane integrity.
- Zinc (30 to 50 mg per day) supports immune function.

#### Herbs

- Urinary antiseptics . are antimicrobial: uva ursi (Arctostaphylos uva ursi), buchu (Agathosma betulina), thyme leaf (Thymus vulgaris), pipissewa (Chimaphila umbellata)
  - Urinary astringents tone and heal urinary tract: horsetail (Equisetum arvense), plantain (Plantago major)
  - Urinary demulcents soothe inflamed urinary tract: corn silk (Zea mays), couch grass (Agropyron repens)

Marshmallow root (Althaea officinalis) is best used alone in a cold infusion. Soak 1 heaping tbsp. of marshmallow root in 1 qt. of cold water overnight. Strain and drink during the day in addition to any other urinary tea. For advanced or recurrent infections prepare a tincture of equal parts of goldenseal (Hydrastis canadensis) and coneflower (Echinacea purpurea). Take 30 drops four to six times per day.

#### Homeopathy

- Apis mellifica for stinging or burning pains that tend to worsen at night and from warmth; individuals for whom this remedy is appropriate feel an intense urge to urinate, yet can only do so in drops
- Aconitum for early symptoms of UTI, particularly with extremely painful urination that is often described as a hot sensation
- Berberis for UTIs with burning or shooting pain during urination that may radiate to the pelvis and/or back; when not urinating, an aching sensation is present in the bladder

- that worsens with movement; pains may also extend to legs and abdomen
  - Cantharis this is the most common and considered the most effective homeopathic remedy for UTI; this remedy is most appropriate for individuals who are restless, experience a burning sensation and decreased urine flow (despite a strong desire to urinate), and have increased sexual desire despite symptoms
  - Mercurius for burning urination and a strong urge to urinate; symptoms worsen at night and tend to be accompanied by chills and sweating; urine is dark and only small amounts pass; burning sensation is often worse when the individual is not urinating
  - Nux vomica for individuals who have a constant urge to urinate; pain is described as needle-like; urge to have a bowel movement may accompany urinary urgency; mild, temporary relief may be experienced from urination and warm baths; symptoms may begin following ingestion of alcohol, coffee, drugs or overeating
  - Pulsatilla for bladder inflammation that begins after an individual develops a sudden chill in hot weather; this remedy is most appropriate for individuals with an

- urgent desire to urinate who may be emotional, crave attention, and dribble urine after laughing, coughing, sneezing, or being surprised
- Sarsaparilla for women who experience severe pain at the end of urination and who, occasionally, may feel compelled to stand to urinate
- Staphysagria for UTIs usually associated with sexual intercourse or following extreme embarrassment or humiliation, particularly from sexual abuse; this remedy is most appropriate for those who have an urgent desire to urinate and have the sensation that a single drop of urine is still present even following urination

#### Follow up

Preventive measures you can follow:

- Urinate both before and after intercourse.
- Have your physician recheck the fit of your diaphragm if you use one.
- Avoid sex while you are being treated for a UTI.

#### **Special Considerations**

If pregnant, you are more at risk for developing a UTI.

#### 161.Uveitis

Uveitis is inflammation of the uvea, the middle layer of the eye between the sclera and the retina. The uvea contains many of the blood vessels that nourish the eye. Inflammation of this area, therefore, can affect the cornea, the retina, the sclera, and other important parts of the eye. Uveitis occurs in acute and chronic forms, and affects men and women equally. It can happen at any age, but occurs primarily between the ages of 20 and 50, and most commonly in one's 20s.

# Signs and Symptoms

• Painful eye(s)

- Redness of the conjunctiva, the membrane covering the surface of the eyeball
- Sensitivity to light
- Blurred or decreased vision
- Tearing
- Redness
- Floaters-experienced as spots in front of your eyes; they represent the movement of protein deposits that accumulate with age on the vitreous body

#### What Causes It?

Although the exact cause of uveitis is often unknown, it may result from trauma to the

eye, as in the case of chemical exposure. In addition, uveitis may be caused by a viral infection (for example, cytomegalovirus, as seen in patients with AIDS), a fungal infection (such as histoplasmosis), or an infection caused by a parasite (such as toxoplasmosis; a newborn may develop uveitis if the mother was exposed to toxoplasmosis during pregnancy). Uveitis is also associated with underlying immunedisorders, including related Reiter's multiple sclerosis. syndrome, juvenile rheumatoid arthritis, Crohn's disease, and Certain diseases-including sarcoidosis. leukemia, lymphoma, and malignant melanoma-may have symptoms resemble uveitis. Some medications, such as rifabutin, cidofovir, pamidronic acid, and sulfonamides, may cause uveitis. In many cases, an underlying cause is not identified.

#### Who's Most At Risk?

- History of an autoimmune disease such as ankylosing spondylitis and others mentioned in the section. what causes it?
- Infections such syphilis, as cytomegalovirus, tuberculosis, Lyme disease, and others mentioned in the section, What Causes It?
- 0 Other eye diseases
- Location in geographic areas that are prone to certain organisms such as histoplasmosis and Lyme disease
- In the case of toxoplasmosis, pigs and mice carry the parasite and can transmit to humans. Cat owners are at increased risk of toxoplasmosis because the litter contains spores of parasite; pregnant women should not change cat litter.
- Those taking certain medications, such as those mentioned in the section, What Causes It?

# What to be done

He or she will do a complete physical examination and take history, checking for signs of underlying disease such as joint problems, mouth sores, rash, and nail pitting. In addition, he or she will perform an eye examination and may order laboratory tests and imaging.

#### **Treatment Options** Prevention

Treatment of any of the underlying diseases discussed above may help prevent the onset of uveitis. Avoiding drugs associated with uveitis, such as rifabutin, may also help prevent this condition.

#### Treatment Plan

Prompt treatment is necessary to preserve eyesight. Warm compresses may help relieve symptoms. Sunglasses can protect eyes if they are sensitive to light.

#### **Drug Therapies**

- Corticosteroids to reduce swelling and pain
- Cycloplegics (such cyclopentolate and homatropine) to reduce pain
- Antimicrobials to treat infection
- Anti-inflammatories to reduce swelling
- Medications suppress the to immune system

#### Surgical and Other Procedures

Surgery may be required to repair any damage to the eyes such as cataracts, glaucoma, or a detached retina, each of which is a potential complication from

#### Alternative Complementary and **Therapies**

CAM therapies may help reduce the severity of diseases that can lead to uveitis.

#### Nutrition

Flavonoids are substances found in fruits vegetables-particularly red grapes, blueberries, cherries, and onions-that may help prevent damage from free radicals. In concentration our bodies, a high flavonoids is found in the eyes, and the (particularly berries from flavonoids blueberries and bilberries) tend to collect in the eye. Quercetin is a flavonoid found in foods and available as a supplement, reduced inflammation and bleeding in the eyes of rats. Doses of quercetin supplements from 200 to 400 mg may be taken three times a day with meals. Quercetin is often used with bromelain to enhance its effects. Carotenoids are other nutritional substances that may also protect against damage from free radicals, especially in the eye. Orange, yellow, and dark green vegetables such as

spinach, carrots, and pumpkins are high in

carotenoids. Supplement forms include mixed natural carotenoids (50,000 IU per day) and the carotenoid lutein (5 mg per day). Lutein is thought to be especially helpful for the eyes.

Foods like saturated fats, fried foods, dairy products, and refined foods that promote inflammation should be eliminated from the diet. Foods that may help fight inflammation, such as flaxseed and fatty fish, generally contain omega-3 essential fatty acids. Other nutrients that may be useful in the treatment of uveitis include the antioxidant vitamins C and E. Taking vitamin C (1000 mg per day) and vitamin E (200 IU per day) protects the light receptors in the eyes from free radicals, thus helping to preserve visual clarity. Also, vitamin E may protect against swelling in the macula, the light-sensitive layer of the eye that could lead to a loss of clear vision in people with uveitis.

#### Herbs

Similarly, herbs high in flavonoids, such as ginkgo (*Ginkgo biloba*) and bilberry (*Vaccinium myrtillus*), may also be useful.

Turmeric (Curcuma longa) Curcumin, the main active substance in turmeric,

reportedly has anti-inflammatory properties. Curcumin (375 mg taken orally three times daily) worked as well as corticosteroid medications but without the side effects.

#### Homeopathy

Currently, no known scientific literature supports the use of homeopathy for uveitis.

# Acupuncture

Acupuncture has been shown to be effective in the treatment of other eye diseases, but it has not yet been fully studied for treatment of uveitis.

#### **Prognosis/Possible Complications**

Prognosis is good with early diagnosis and treatment. Treatment may be short-term or long-term, depending on the cause. Possible complications include glaucoma, cataracts, vision loss, and detached retina.

#### Follow up

Physician may use slit lamp to examine structures within the eye one layer at a time. Provider will also measure the pressure within eye every 1 to 7 days during the acute phase. A follow-up appointment every 1 to 6 months is generally recommended; physician will instruct on the exact frequency of visits.

# 162. Vaginitis; Vaginal Inflammation

Forty percent of all types of vaginitis are caused by candida, a yeast-like fungus. When it multiplies in the vaginal tract, the disorder is called vulvovaginitis. Women often refer to it as a "yeast infection." About 75 percent of women get candida vaginitis at some time in their lives.

## Signs and Symptoms

- Itching in the vagina and vulva
- Vaginal discharge (small amounts are normal, however)
  - Red, swollen, painful vaginal mucous membranes and external genitalia
- Satellite lesions (tender, red, pusfilled bumps, which can spread to thighs and anus)

# What Causes It?

- Antibiotics-especially broadspectrum types
- Pregnancy-from increased heat and moisture and hormonal shifts
- Diabetes

- Corticosteroid use
- Human immunodeficiency virus (HIV) infection
- Taking birth control pills
- · Being overweight
- High sugar intake
- Wearing panty hose, tight clothing, or noncotton underwear

#### What to be done

Physician will give a pelvic examination and swab vagina to check for candida. Probably will also have a Pap smear. Some women have chronic yeast infections. If this happens, provider may want to do additional tests.

# Treatment Options Treatment Plan

Usually topical treatments are started before oral medications. In the case of chronic infection, the actual dosage and length of treatment may be increased. If you have vaginitis, you should avoid excessive exertion and sweating, keep vaginal area as

dry as possible, and avoid sexual relations until symptoms clear. Take showers instead of baths, use unscented soap, and always wipe from front to back after bowel movements. Wearing cotton underwear and avoiding pantyhose and tight-fitting pants can help prevent infection.

**Drug Therapies** 

Topical and oral therapies are considered to be almost equally effective.

- therapies-may Topical initially cause burning from inflammation polyenes (nystatin)-one tablet twice a day for two weeks placed high in the vagina with applicator; 70% to 80% effective; no side effects on other parts of the body. Azole derivatives such as imidazole (such as miconazole, butoconazole) and fluconazole, (such triazole as terconazole)-vaginal cream one to five days, also may be externally; 85% to 90% effective; no side effects on other parts of the body.
- Oral therapies: fluconazole-75% to 92% effective; 150 mg once; often considered the treatment of choice; should not be used during pregnancy; appears to help HIV infected women. Ketoconazole-83% effective; 400 mg/day for five days, or for two weeks with recurring infection. Oral nystatin helps reduce intestinal problems.

Complementary and Alternative Therapies

Use only one of the following douches at one time. Do not douche during menstrual periods. For first time or acute infection try the vinegar douche or boric acid capsules. For chronic vaginitis, use the herbal combination douche. For recurrent vaginitis, use the Betadine douche. Stop douching if you are in pain or symptoms get worse.

- White vinegar: 1 to 2 tbsp. to 1 pint of water. Douche daily for 10 to 14 days.
- Boric acid: One capsule (600 mg) inserted daily for 10 to 14 days. May cause irritation or problems from systemic absorption.
- Herbal combination: Mix equal parts of oregano leaf (Oreganum

vulgare), goldenseal root (Hydrastis canadensis), and coneflower (Echinacea purpurea). Steep 1 heaping tbsp. of herbal mixture in 1 pint of water. Cool and douche daily for 10 to 14 days.

Povidone iodine (Betadine):
 Douche with one part iodine to 100 parts water twice daily for 10 to 14 days. Prolonged use can suppress thyroid function.

#### Nutrition

- Avoid simple and refined sugars (breads, pasta, baked goods, sweets), dairy products, alcohol, peanuts, fresh or dried fruit, fruit juice, and food allergens. Eat plenty of protein, vegetables, and grains.
- Lactobacillus acidophilus reestablishes normal bacteria in the body and prevents the overgrowth of candida. Take one capsule orally two to three times per day. Insert one capsule into the vagina nightly during treatment (not to exceed 14 nights).
- Vitamin A (10,000 IU per day) or beta-carotene (50,000 IU per day) enhances the integrity of the vaginal lining. Remember to avoid high doses of vitamin A in pregnancy or if you may become pregnant within the next three months.
- Zinc (30 mg per day) and vitamin E (400 to 800 IU per day) are essential for immune function.
- Vitamin C (250 to 500 mg two times per day) enhances immunity and helps restore the integrity of vaginal lining.

#### Herbs

- Pau d'arco tea has antifungal effects.
- Garlic (Allium sativum) has antimicrobial, antifungal, and immune-stimulating properties.
   Prepare a tea with two cloves of garlic. May add fresh lemon and honey for flavor.

#### Homeopathy

Calcarea carbonica for intense itching with thick white or yellowish discharge that is worse before you start your period

- · Borax for burning pains with eggwhite colored discharge
- · Sepia for burning pains with milky white discharge and pressure in vaginal area, especially if you feel depressed and irritable
  - · Graphites for backache with thin white discharge that is worse in the morning and when walking
  - Arsenicum album for when you have burning, discharge
  - combinations are Homeopathic available as creams to apply vaginally.

Acupuncture

Acupuncture may be helpful in improving immune function.

Follow up

To prevent recurrence of infection, take showers instead of baths, use unscented soap, and always wipe from front to back after bowel movements. Wearing cotton underwear and avoiding pantyhose and tight-fitting pants can help prevent infection.

**Special Considerations** 

Yeast infections occur twice as often during pregnancy.

# 163. Varicella-Zoster Virus (VZV); Chickenpox And Shingles; Shingles And Chickenpox; Varicella and Herpes Zoster Viruses

Varicella-zoster virus (VZV) is known to cause two diseases: chickenpox (varicella) and shingles (herpes zoster). Chickenpox is a common contagious disease of children that usually has a benign course. However, chickenpox in adults or people with weakened immune systems can have serious complications. Second attacks of chickenpox are very rare. Shingles is caused by a reactivation of the latent VZV.

#### Signs and Symptoms Chicken Pox

The typical rash of chickenpox is made up of groups of small, itchy blisters surrounded by inflamed skin. The rash usually begins as one or two lesions, quickly spreading throughout the body including the trunk, scalp, face, arms, and legs. Over four days, each blister tends to dry out and form a scab, which then falls off between 9 to 13 days later.

The rash is usually preceded by:

- Fever, usually low-grade
- Fatigue
- Headache
- Flu-like symptoms

Shingles

The typical rash of shingles begins as redness (erythema) followed by appearance of blisters that cover concentrated area of the body on either the face, trunk, shoulders and neck, or legs (unlike the rash of chicken pox, which is generally diffuse, meaning that it is widespread throughout the body). These eruptions follow the path of an infected nerve. The trunk is the area affected in 50% to 60% of cases. The next most common site is one side of the face, which may even involve the tongue, the eye, or the ear. Before the rash appears, you will have warning symptoms of pain experienced as a sharp, aching, piercing, tearing, or burning sensation limited to the specific part of the body where the rash appears 1 to 5 days later. That area may also feel itchy, numb, and unbearably sensitive to touch, even just from your clothes touching skin in that

Other symptoms that you may experience include:

- Fever (not so common)
- Malaise (feeling bad overall) and other flu-like symptoms including muscle aches
- Headache
- Swollen lymph nodes
- disturbances, drooping eyelid, loss of eye motion (if in a nerve that affects one of eyes or the muscles surrounding it)
- Taste abnormalities (if in a nerve that affects tongue)
- Hearing loss (if in a nerve that affects one of ears)

#### Causes

#### Chickenpox

Anyone who has not had chickenpox or the vaccine is at risk for contracting the virus if exposed to someone with either chickenpox or shingles. The incubation period is

between 10 and 20 days. The virus is spread through sneezing, coughing, and breathing in other words, when someone with chickenpox sneezes or coughs, there are respiratory droplets with the VZV virus in the air. Another possible way to get chickenpox is to come into direct or indirect contact with discharge from VZV skin lesions. The virus is contagious from two days before the rash appears until all of the lesions have crusted over.

#### Shingles

While the same virus that leads to chickenpox causes shingles, the way that you develop this painful skin lesion is quite different. After you have had chickenpox, the virus lives in a dormant state (like it is hibernating) in nerve cells along the spine. Later in life, when it is reactivated (usually from a weakened immune system, aging, or other), the virus travels down the tract of the particular nerve where it was "hibernating", first causing the pain and other sensations followed by the rash. The pattern or path that the symptoms follow is called a dermatome, which essentially means the area of the skin that the nerve supplies.

#### Risk Factors Chicken Pox

- Exposure to VZV if you have neither had chicken pox nor received the vaccine
- Age under 10
- Late winter and early spring is the most common time that the virus is spread

## Shingles

- Increasing Age
- Stress
- Impaired immune system
- Having had chicken pox before age

#### Diagnosis

Physician may take a scarping from one of skin lesions to look at under the microscope. This is called a Tzanck test. Similarly, if you have shingles, it is rare that provider needs to perform any tests because the history of pain and other symptoms and the rash itself are very typical. If the doctor is not certain, however, a Tzanck test may be performed or some blood tests.

## Preventive Care

- Chicken Pox vaccine is given to every child over 1 year old; your child receive the vaccine before age 13, then you only need one dose. If you receive the vaccine when you are older than 13 then you should get a second dose 1 to 2 months later.
- If you have never had chickenpox or the vaccine, avoid contact with anyone who has chickenpox and avoid contact with the skin lesions of anyone with shingles.
  - To avoid spreading to others, children with chickenpox should be kept out of school or day-care until all of the blisters have scabbed over.
  - Capsaicin cream (from cayenne pepper) may help prevent postherpetic neuralgia, a possible complication from shingles.

## **Treatment Approach**

The goal is to make you as comfortable as possible while you have either condition and to shorten the length of time that you have the pain and itching associated with shingles in particular. Many lifestyle approaches and medications may be helpful for these purposes. Mind/Body techniques for relaxation can also help alleviate pain and reduce stress associated with shingles.

#### Lifestyle

- Apply cool water compresses to your skin or soak in a bathtub filled with cool water
- Add finely ground oatmeal to the bathtub
- Apply calamine lotion to the affected areas of your skin
- Trim your fingernails to avoid infection
- For infants with chickenpox, try loose fitting, soft cotton or flannel mittens

#### Medications

- Acetaminophen-for fever and pain reduction
- Acyclovir-this may be prescribed for children over 2 years old and adults with chickenpox
- Other acyclovir-like medications that may also shorten the course of shingles, reduce pain, reduce

complications, and/or protect you if you are immunocompromised include famciclovir and valacyclovir. For best results, one of these medications should be started within 24 hours of the onset of pain or similar sensations and before the blisters appear.

- Prednisone or other corticosteroids, prescribed with acyclovir, may be used to reduce pain from shingles
- Antihistamines, like diphenhydramine, may be considered to control itching, especially at night for children
- Tricyclic antidepressants, such as nortriptyline, amitriptyline, and desipramine, are prescribed for post-herpetic neuralgia

# **Nutrition and Dietary Supplements Lysine**

Taking lysine supplements may speed recovery time from shingles and reduce the chance of recurrent breakouts of this skin condition.

#### Herbs

# Cayenne (Capsicum frutescens/Capsicum spp.)

Capsaicin cream made from cayenne pepper has very powerful pain-relieving properties when applied to the surface of the skin. Capsaicin may help relieve the pain of postherpetic neuralgia

# German Chamomile (Matricaria recutita)

Traditionally, this herb has been used to treat skin conditions and childhood illness like chickenpox.

# Peppermint Oil (Mentha x piperita)

Applying peppermint oil to the painful area may help relieve symptoms of postherapeutic neuralgia, a potential complication of shingles.

#### Others

All of the herbs mentioned below would be prescribed to be used topically for shingles or chicken pox.

- Aloe (Aloe vera/Aloe barbadensis/Aloe ferox) - for herpes and other skin conditions
- Burdock root (Arctium lappa) used traditionally for skin lesions
- Lemon balm (Melissa officinalis) used topically for herpes lesions

- Licorice root (Glycyrrhiza glabra) used traditionally for skin lesions; demonstrates activity against VZV in test-tubes; and, glycyrrhizin (an active component derived from licorice) may help reduce pain associated with shingles more quickly; this herb should not be used if you have high blood pressure
- Madonna lily (*Lilium candidum*) medicinal plant used traditionally in Northern Italy for shingles

#### Acupuncture

Acupuncture may help relieve the nerve pain associated with shingles, especially when combined with standard medications. In the case of shingles, a qi deficiency is usually detected in the liver meridian with relative excess in the gallbladder meridian. Acupuncturists will often provide needle or moxibustion treatment around painful areas.

#### Homeopathy Chicken Pox:

- Antimonium crudum -- for irritable children who are extremely sensitive to touch and may have a thick white coating on the tongue
- Antimonium tartaricum -- for large, slowly appearing pox lesions accompanied by
- Mercurius -- for large, pus-filled pox which may ooze; this remedy is most appropriate for individuals who sweat profusely and may have enlarged lymph nodes
- Pulsatilla -- for fever associated with chicken pox; children who tend to be whiny, clingy, and weepy but have very little thirst despite the fever
- Rhus toxicodendron -- for severe itching that worsens at night and improves with warm compresses or a bath; this remedy is the most commonly prescribed
- Sulphur -- for extremely itchy lesions that worsen with heat or bathing and which children will often scratch to the point of bleeding

#### Shingles:

- Arsenicum -- for intense burning sensation that improves with warmth and worsens with cold
- Lachesis -- for particularly dark, sometimes purple, lesions on the left side of the body
- Mezereum -- for burning, sharp pains that worsen with touch; this remedy is most appropriate for individuals who are naturally chilly and sensitive to cold
- Rananunculus bolbosus -- for lesions located on the chest or back; pain worsens with touch and movement
- Rhus toxicodendron -- for intense itching and pain that may be relieved by touch

#### Mind/Body Medicine

The following relaxation techniques may help reduce the pain and stress associated with shingles and its potential complication of post-herpetic neuralgia:

- Meditation
- Breathing exercises
- Progressive muscle relaxation
  - Biofeedback

Also, cognitive behavioral therapy can help you restructure your thinking about the pain from feeling completely helpless to feeling like the pain is only one negative aspect of your overall positive life. Another practice from which people with post-herpatic neuralgia have reported some relief is:

Hypnosis

#### **Traditional Chinese Medicine**

The following traditional Chinese medical techniques to usual Western medical care helped to reduce pain:

- Acupuncture
- Cupping (cups with suction are applied to areas of the skin to stimulate circulation)
  - Meditation
  - Chinese herbs

In addition, a traditional Chinese herb called *Clinacanthus nutans* (*Bi Phaya Yaw*) is able to kill VZV and other herpes viruses in test tubes. An extract of this herb appears that a topical form of C. nutans extract may shorten the length of time that one has skin lesions from this condition.

# Other Considerations Pregnancy

If acquire chickenpox when pregnant, the infection may spread to the fetus.

#### **Special Populations**

Conditions that compromise your immune function include:

- Human Immunodeficiency Virus (HIV) infection
- Acquired Immunodeficiency Syndrome (AIDS)
- Organ transplant recipient on medications to avoid rejection of the new organ
- Cancer, especially leukemia, Hodgkin's disease and other lymphomas, or if you are receiving chemotherapy
- If you have an autoimmune disease (like rheumatoid arthritis, lupus, multiple sclerosis, and Crohn's disease) and are taking drugs that suppress your immune system in order to control the inflammation from any of these conditions

#### **Warnings and Precautions**

- Aspirin must not be used in children with chickenpox or shingles because of risk of Reye's syndrome, which can cause liver and brain damage.
- Call the physician if symptoms of confusion, vomiting, or weakness, even paralysis, of the arms, legs, trunk, or face begin during or soon after a chickenpox or shingles infection.

#### **Prognosis and Complications**

While chickenpox usually goes away on its own with non-serious complications like itching and scarring, severe and sometimes fatal infections may occur, particularly in newborn infants, adults, and people whose immune systems are weakened. Such potential infections include:

- Encephalitis (a brain infection)
- Myocarditis (an infection of the heart muscle)
- Pneumonia
- Secondary bacterial skin infection

Shingles usually clears in 2 to 3 weeks and rarely recurs. Your chance of getting another bout of shingles is only 1% to 5% if you have a normal, working immune system. If you are immunocompromised,

your risk for recurrence is higher. Potential complications from shingles include:

- Shingles lesions involving the mouth or eye; the latter may lead to blindness if not treated.
- Post-herpetic neuralgia, which occurs in 10% to 20% of those with shingles; this is persistent pain for months to years even after the skin lesions have cleared up.
- Secondary bacterial skin infections.
- Encephalitis (a brain infection) or sepsis (an infection in your blood stream, affecting many organs in the body) if you are immunocompromised.

#### 164. Varicose Veins

Varicose veins, the most common vein disorder. They are large, twisted veins, usually in the legs and feet, that are not transporting blood effectively. They appear as bulging, bluish cords beneath the surface of skin. If ignored, varicose veins can cause not only discomfort and cosmetic concerns, but also serious complications, such as phlebitis, skin ulcers, and blood clots.

#### Signs and Symptoms

- Prominent dark-blue blood vessels, especially in the legs and feet
- · Aching, tender, heavy, or sore legs
- Swelling in the ankles or feet, especially after standing
- · Breaks in the skin
- · Superficial blood clots
- Bleeding after a minor injury (rare)

#### What Causes It?

Varicose veins develop when veins stretch and their valves, which prevent back flow of blood, fail. Primary varicose veins result from weakness in the walls of the veins. Secondary varicose veins are most often caused by problems with veins lying deep among the muscles, which carry about 90 percent of the returning blood. These problems include blood clots and the resulting diversion of blood flow into other superficial vessels.

# Who's Most At Risk?

People with the following conditions or characteristics are at risk for developing varicose veins.

- Family history (accounts for 50% of cases)
- Female (three times more common)
  - Hormonal changes related to pregnancy, premenstrual period, and menopause
  - Standing for long periods

- Obesity
- Tumors
- Certain diseases
- Arteriovenous fistulas (abnormal blood flow between arteries and veins)

#### What to be done

Tests to determine how well veins are functioning and to distinguish between primary and secondary varicose veins. Imaging procedures may also be used.

#### **Treatment Options**

Conservative treatments involve avoiding prolonged sitting, standing, or walking; getting regular exercise; elevating legs on a periodic basis; and wearing compression stockings.

#### Prevention

Regular exercise improves vein functioning, and weight loss and exercise decrease the likelihood of blood clots.

#### Surgical and Other Procedures

- Sclerotherapy-injection of a solution into a varicose vein, followed by application of a compression dressing, in order to obliterate the vein
- Radiofrequency ablation-a new technique in which a catheter is threaded into the varicose vein to heat the vein wall in order to obliterate the vein and improve the function of its valve
- Surgery-removal of the varicose vein

#### Complementary and Alternative Therapies Nutrition

Eat foods rich in dietary fiber in the form of complex carbohydrates (whole grains) and bioflavonoids (dark berries, dark leafy greens, garlic, and onions). Potentially beneficial nutrient supplements include vitamin C (500 to 1,000 mg three times per day), vitamin E (200 to 600 IU per day), and zinc (15 to 30 mg per day).

Herbs

- Horse chestnut (Aesculus hippocastanum) 500 mg three times per day or standardized Aescin 10 mg three times per day
- Butcher's broom (Ruscus aculeatus) standardized extract (9% to 11% ruscogenin) 100 mg three times per day
- Gotu kola (*Centella asiatica*) 1,000 mg two to four times per day, or standardized extract (asiaticoside 40%, Asiatic acid 30%, madecassoside 1% to 2%) 60 mg one to two times per day
- Bilberry (*Vaccinium myrtillus*) standardized extract (25% anthocyanoside) 80 to 160 mg three times per day.
- Proanthocyanidin 100mg three times per day is beneficial in varicose veins, haemorrhoids, venous insufficiency, and posthaemorrhoidectomy and postdefacation pain syndrome.

Combine the following in equal parts: yarrow (Achillea millefolium), hawthorn

(Crataegus monogyna), ginkgo (Ginkgo biloba), marigold (Calendula officinalis), horse chestnut (Aesculus hippocastanum), and ginger (Zingiber officinalis). Take 30 to 60 drops tincture two to three times per day or drink three to four cups of tea daily.

Homeopathy

Some of the most common remedies include Aesculus, Fluoricum acidum, Hamamelis, and Secale. Acute dose is three to five pellets of 12X to 30 C every one to four hours until symptoms are relieved.

Physical Medicine

Cold compresses of witch hazel (*Hamamelis virginiana*) and yarrow (*Achillea millefolium*) tea may provide temporary relief.

Acupuncture and Massage

Acupuncture and massage may help improve the overall circulatory system.

Prognosis/Possible Complications

Varicose vein disease is a chronic condition, and new varicose veins often develop after treatment.

Follow up

Walking after sclerotherapy is important to help promote healing. If you've had surgical treatment, contact physician if you develop severe pain, tenderness, swelling, scabs, or blisters.

#### 165.Warts

Warts are small, generally harmless, and usually painless growths on the skin. Warts can be disfiguring and embarrassing, however, and occasionally they will hurt or itch. The different types of warts include the following.

- Common warts: usually on the hands, but can appear anywhere
- Flat warts: generally found on the face and back of the hands
- Genital warts: normally found on the external genitalia, in the pubic area, and in the area between the thighs, but can appear inside the vagina and in the anal canal
- Plantar warts: found on the soles of the feet

Genital warts are quite contagious, while common, flat, and plantar warts are much

less likely to spread from person to person. All warts can spread from one part of the body to another. Some warts will disappear without treatment, although it can take as long as six months to two years.

#### Signs and Symptoms

- Common warts: usually begin as tiny, smooth, flesh-colored eruptions and grow into rough growths perhaps 1/4 inch across or in clusters
- Flat warts: small flesh-colored or pink growths with flat tops
- Genital warts: tiny eruptions that grow to resemble common warts
- Plantar warts: rough, flattened, callus-like growths, often with tiny black dots in the center; frequently

tender; can disrupt your posture, resulting in leg or back pain

#### What Causes It?

Warts are caused by a common virus in humans, the human papillomavirus (HPV). Your risk of getting warts is increased by direct contact with warts or the fluid in warts (notably genital warts), using communal facilities, skin trauma, and diseases or drugs that weaken your immune system.

#### What to be done

Warts can generally be diagnosed by location and appearance. Physician may want to cut into a wart to confirm that it is not a corn, callus, or other similar-appearing growth, but rarely will provider have to order laboratory tests. If you have genital warts, provider will want to check inside anus and (in women) vagina.

#### **Treatment Options**

Medical treatments include drug therapy, cryosurgery ("freezing" the wart to destroy tissue), electrosurgery, lasers, and cutting out the wart.

#### **Drug Therapies**

Common, flat, and plantar warts: nonprescription preparations using salicylic acid are available over the counter. Genital warts: in most cases, physician will either apply podophyllin weekly or prescribe a podofilox for local application.

# Complementary and Alternative Therapies

Nutritional and herbal support may enhance immune function and minimize recurrence of HPV, the virus that causes warts.

#### Nutrition

Some changes can make in diet include the following.

- Eliminate caffeine, alcohol, refined foods, and sugar.
- Avoid saturated fats (animal protein and dairy products).
- Increase whole grains, fresh vegetables, fruits, legumes, and essential fatty acids (nuts, seeds, and cold-water fish).
- Vitamin C (250 to 500 mg two times per day), beta-carotene (100,000 IU per day), vitamin E (400 IU per day), and zinc (15 to 30 mg per day) support immune function and healing. Vitamin E

- may also be put directly on a wart to treat it.
- B complex (50 to 100 mg per day) helps reduce the effects of stress, which can weaken your immune system.
- Folic acid (800 mcg per day) is recommended for genital warts.
- Selenium (200 mcg per day) supports immune function.

#### Herbs

Combine tinctures of one part goldenseal (Hydrastis canadensis) with two parts each of the following herbs: lomatium (Lomatium dissectum), licorice root (Glycyrrhiza glabra), coneflower (Echinacea purpurea), osha (Ligusticum porteri), and thuja leaf (Thuja occidentalis). Take 30 drops twice a day. Do not take licorice if you have high blood pressure.

Topical applications are most effective for treating warts. Stop any topical application if irritation should develop in the surrounding skin. For plantar, flat, and common warts use the following applications.

- Banana peel patch. Cut a piece of banana peel and place it over the wart before going to bed. Tape in place.
- Raw garlic patch. Cover the wart and surrounding skin with a thin layer of castor oil or olive oil. Apply a thin slice of fresh garlic and tape in place.

To maximize benefit, place two to four drops of tincture of thuja or greater celandine (*Chelidonium majus*) on the wart before covering with peel or garlic. This application may need to be repeated nightly for up to three weeks. The wart will turn black as it begins to die. For external genital warts, paint the warts with vitamin A or beta-carotene once or twice daily. Add 3 to 4 drops each of thuja, echinacea, and lomatium for best results.

### Homeopathy

- Antimonium crudum for either rough and hardened or smooth warts as well as plantar warts in otherwise healthy people
- Causticum for fleshy warts anywhere on the body, but

- particularly those near the fingernails, lips, or on the face
- Dulcamara for large, smooth, and flat warts on the face, fingers, or back of the hand
- Nitricum acidum -for soft warts on the genitals, anus, or lips; these warts or often irregularly shaped and may bleed and produce an excessive amount of sharp pain
- Ruta -for plantar warts, particularly if they are sore and have a smooth surface

• Thuja - for warts of any location except plantar; this remedy may be particularly useful for warts that are on the chin, anus, or genitals, are generally soft and may be painful and bleeding

#### Acupuncture

Acupuncture may be helpful in stimulating immune system.

#### **Special Considerations**

Do not use podophyllin in pregnancy.

#### 166.Wounds

A wound is a break in the structure of an organ or tissue caused by an external agent. Most wounds affect the skin, the first line of against infection. Commonly recognized examples include bruises. grazes, tears, cuts, punctures (made by pointed objects), incisions (clean cuts), contusions (may not break the skin but can lacerations cause damage), (jagged, irregular cuts), and burns.

#### Signs and Symptoms

The following signs and symptoms often accompany wounds.

- · Abnormal flushing of the skin
- Swelling as a result of the accumulation of fluid in body tissues
- Pain and tenderness
- Heat
- Possible fever with infection
- · Bleeding or oozing pus
- Loss of function (or mobility)
- Foul smell (in infected wounds only)

#### What Causes It?

Wounds can be caused by any of the following.

- Blunt or penetrating trauma
- Surgery
- Chemical injury
- Thermal injury
- Temperature extremes (e.g., burns, frostbite)
- Radiation

## Who's Most At Risk?

The following risk factors are associated with wounds.

- Age (older people are at higher risk)
- Malnourishment, especially protein depletion
- Trace element deficiencies, especially zinc
- Vitamin deficiencies, especially vitamin C
- Compromised general health
- Steroid use
- Radiation and chemotherapy
- Diabetes
- Smoking
- Weight loss or obesity

#### What to be done

Determine the extent and severity of the injury, possible contamination, and conditions that might complicate treatment. Order laboratory tests, such as a blood test and urinalysis, as well as a culture to check for bacteria in the wound. Suggest a tetanus vaccine.

# **Treatment Options**

#### Prevention

Most wounds are accidental and often preventable. Carefully cleaning the wound and using antibiotics as needed can prevent a wound, infection and other complications.

#### Treatment Plan

Clean lacerated wounds are minor and can be treated at home. Clean the wound with a gentle cleanser and stop the bleeding, then cover with an adhesive bandage. Other wounds, particularly those where the bleeding will not stop, or any wounds resulting from animal or human bites or fishhook injuries can be serious and must be treated. Determine whether suturing or skin grafting, or whether it must be kept open because of contamination can close the wound immediately. **Infected wounds are never closed** until the wound has been successfully treated.

#### **Drug Therapies**

- Analgesics, or pain relievers
- Antiseptics, to clean contaminated wounds
- Antibiotics for infections or sepsis (destruction of tissues by diseasecausing bacteria, accompanied by a strong odor)
- Medicated dressings
- Corticosteroid hormones
- Tetanus shots
- Growth factors (substances that stimulate healing)

#### Surgical and Other Procedures

This may involve cutting out burned tissue and removing contaminated tissue, skin grafting, and draining wound abscesses.

# Complementary and Alternative Therapies

For chronic or serious wounds, consider alternative treatments such as hyperbaric oxygen therapy, whirlpool therapy, ultrasound treatment, electrical stimulation, magnetic therapy, and therapeutic touch.

Hyperbaric Oxygen Therapy Hyperbaric oxygen treatments have been found to increase the rate of collagen deposition, angiogenesis, and bacterial clearance. If the wound environment has more oxygen, anaerobic bacteria that cause serious infections cannot grow. During hyperbaric oxygen therapy, the patient is placed in a hyperbaric chamber in which pressure and oxygen concentration increase. The patient breathes in higher oxygen concentrations and the wound itself is exposed to the higher concentration of oxygen under pressure. With the patient in the chamber, the pressure is gradually increased and then, after treatment, it is gradually decreased again. Plastic surgeons and other wound care specialists have used hyperbaric oxygen therapy for many years difficult or complicated, treating nonhealing wounds. It is well recognized as a very effective treatment.

Whirlpool Therapy

Use whirlpool therapy once or twice daily for about 20 minutes during the inflammatory stage of healing to enhance circulation and bring more oxygen into the wound area. The whirlpool also softens and

loosens dead tissue and cleanses the wound. Some patients find that whirlpool therapy relieves wound pain. Whirlpool therapy should not be used on wounds that are in the proliferative stage of healing because it will damage the fragile skin cells. It should not be used on venous ulcers, which result from too much blood in the area.

#### **Ultrasound Treatment**

Ultrasound treatment mechanical uses vibration delivered at a frequency above the range of human hearing. Covering the wound area with a hydrogel film and applying ultrasound during inflammatory and proliferative stages stimulates the cells involved in wound healing and also warms the tissue, enhancing healing by improving circulation.

#### **Electrical Stimulation**

The body has its own bioelectric system that influences wound healing by attracting repair cells, changing the permeability of cell membranes, and therefore affecting secretions and orienting cell structures. A current of energy is generated between the skin and inner tissues when a break in the skin occurs. This current is enhanced by a moist wound environment and can be mimicked by electrical stimulation that is believed to accelerate the healing process. Electrical stimulation uses electrodes that are positioned around the wound area. It can be used on most wounds during all three stages to support, speed, and even improve wound healing. Use of this therapy results in a smoother, thinner scar.

#### Magnetic Therapy

Magnetic therapy has a rationale similar to that for electrical stimulation, because the body's magnetic field is related to its bioelectric system. The use of magnets has been reported to increase blood flow and enhance cell growth by transferring energy. Magnets also affect nerve signals in ways that may relieve pain.

#### Therapeutic Touch

Biofield therapy, the "laying on of hands," is a very old form of healing. Underlying rationales fall into two categories: (1) that the practitioner modifies, directs, or amplifies the human biofield; and (2) that the healing force comes through the practitioner from a supernatural source, such as God or the cosmos. Biofield practitioners use a variety of approaches, but have a holistic focus that incorporates mental, emotional, and physical health. Massage

therapy is thought to enhance healing, both by relieving stress and by stimulating the nervous and circulatory systems. Benefits of therapeutic touch included decreased depression, anger, and pain

Research: Growth Factors and Immune Response

There are seven major growth factor families: epidermal growth factor (EGF), transforming growth factor-beta (TGF-beta), insulin-like growth factor 1 (IGF-1), interleukins (IIs), platelet-derived growth factor (PDGF), fibroblast growth factor (FGF), and colony-stimulating factors (CSF).

Growth Factor (EGF) **Epidermal** This growth factor promotes epidermal growth. Up regulated EGF has been correlated to cancer progression, manipulation of EGF also has a role in cancer therapy as well as wound repair. EGF is usually applied topically, although it can also be used intravenously. When EGF is applied to injured skin, such as burns, ulcers (skin or GI tract), and surgical corneal (eye) wounds, it does promote healing. Therefore, EGF has been used for diabetic leg ulcers and venous stasis ulcers as a topical application. EGF is expensive, but it is available for use.

# Insulin-Like Growth Factor (IGF-1 and other IGFs)

Topical insulin accelerated wound healing, perhaps because insulin is chemically similar to IGF-1. Growth hormone secreted by the pituitary gland causes the liver to produce IGF-1, which encourages cell growth and maintenance and repair in a variety of tissues. Many tissues in the body (including muscle, GI tract, skin, as well as many others) have receptors for IGF-1. IGFand IGF-2 are important in skeletal muscle repair and regeneration. IGF-1 is in medical trials. Topically applied insulin itself accelerates wound healing, perhaps because of its chemical similarity to IGF-1. There nutrients are also dihydroepiandrosterone (DHEA) that can increase IGF-1 levels.

#### **Human Growth Hormone (HGH)**

With aging, growth hormone secretion and IGF-1 production decline, contributing to a variety of biochemical and physical degenerative changes, including delayed wound healing. HGH is much more readily available than IGF-1 and has been used to

improve body composition and effect healing

**Fibroblast Growth Factor-10 (FGF-10)** Application of FGF-10 improves wound strength, collagen content, and epidermal thickness and still research.

# Vascular Endothelial Growth Factor (VEGF)

VEGF promotes the development of new blood vessels, including the smooth muscle cells found in the walls of blood vessels. Injection of VEGF directly into heart muscle damaged by coronary disease has also induced the formation of new blood vessels, obviating the need for cardiac bypass. VEGF in wound healing is being used in large cardiac centers to revascularize heart muscle.

# Modulating the Immune Response During Healing

Interleukin is a generic term for a family of nonantibody proteins called cytokines that act as cellular mediators in generating an immune response. IL-6 is a cytokine that stimulates a number of immune system reactions that promote the healing action of antibodies at the wound site. Excessive inflammation is one result of overexpression of IL-6 leading to scarring and scar contraction. IL-6 levels should be monitored in skeletal joints, aiming for a certain optimal level that promotes enough influx of inflammatory cells to encourage healing, but not so much as to damage healing tissue with excessive scarring. IL-10 is a cytokine that inhibits the inflammatory response. The human fetus has the ability to heal without scarring and IL-10 is "necessary for scarless wound repair to occur".

#### Nutrition

Lower dose or stop use when wound has healed.

- Beta-carotene (250,000 IU a day) or vitamin A (50,000 IU a day) to promote healthy scar tissue. Reduce dose to 50,000 IU of beta-carotene and 15,000 to 25,000 IU of vitamin A daily after two weeks. Do not advice vitamin A during pregnancy or trying to conceive.
- Vitamin C (250 to 500 mg twice per day) enhances tissue formation and strength.
- Vitamin E (400 to 800 IU a day) promotes healing. May be used externally once the acute phase has

passed and new skin has formed. Higher doses may be beneficial for healing burns.

- Zinc (10 to 30 mg a day) stimulates wound healing.
- Bromelain (250 mg three times a day between meals) reduces postsurgical swelling, bruising, healing time, and pain.

Certain nutrients such as aloe vera, arginine, glutamine, zinc, copper, and vitamin C play key roles in wound healing.

#### Herbs

- Turmeric (*Curcuma longa*) is an anti-inflammatory that enhances use of bromelain. Use dried extract 250 to 500 mg three times a day.
- Gotu kola (Centella asiatica) promotes connective tissue repair, supports normal wound healing, and prevents a scar from growing larger. Use standardized extracts 60 mg one to two times daily, or 60 drops of tincture three to four times per day. It may also be applied topically to burns to minimize skin shrinking. Note that gotu kola can cause sleeplessness and anxiety in some people. Reduce the dose if this happens.
- Coneflower (Echinacea purpurea) and goldenseal (Hydrastis canadensis) used together protect against infection. Use equal parts tincture 30 to 60 drops three to four times a day.
- Powders of goldenseal, comfrey (Symphytum officinale), and marshmallow root (Althea officinalis) enhance healing and minimize infection. Apply to the skin surface. Washes or compresses of cooled tea containing these herbs may also be used.
- St. John's wort (Hypericum perforatum) oil helps prevent postsurgical adhesions and may relieve nerve pain. Apply to the skin.
- Aloe vera gel provides excellent pain relief and speeds healing.
   Apply to burns and wounds.
- Marigold (Calendula officinalis)
   and plantain (Plantago major) aid
   in healing. Can be used on the skin
   as salves or creams. These herbs
   should only be used on incisions or

- "clean" wounds. Due to their fast action, they could keep an infection from healing.
- Granulated or confectioner's sugar applied to the skin can help heal skin ulcers, such as those caused by diabetes or bedsores.

#### Homeopathy

- Arnica for bruised feeling and grief and/or shock from trauma
- Staphysagria for pain from lacerations or surgical incisions
- Symphytum for wounds which penetrate to and involve bone
- Ledum for puncture wounds
- Urtica for burns
- *Hypericum* for injuries and trauma to nerves
- Wala for keloids

# **Prognosis/Possible Complications**

Prognosis depends on the extent and severity of the initial wound, as well as any subsequent infection. There are several complications such as infection; keloid scar tissue formation; gangrene; wound hemorrhage; sepsis and tetanus.

#### Follow up

Check for signs of bleeding, discoloration, or swelling in and around the wound. Fever, increasing pain, and the development of drainage, which may indicate an infection.

#### RESOURCES

#### 1. Web pages

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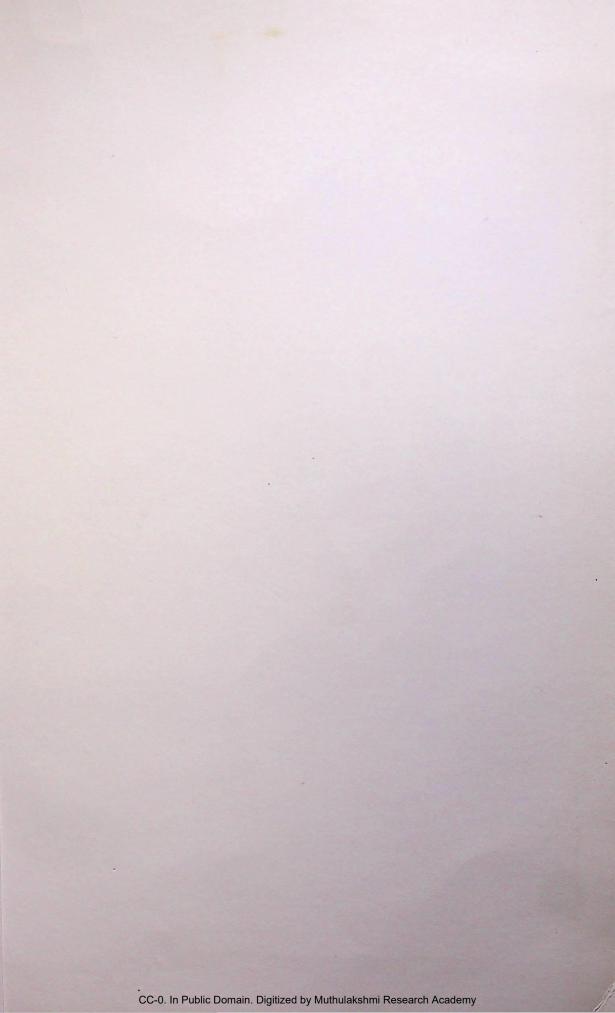
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